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CONTENTS

PHILOSOPHY AND EDUCATION — HAROLD TAYLOR — 1

During a symposium sponsored by the American Philosophical Association on the Contribution of Philosophy to Education, held at Yale University, President Taylor, of Sarah Lawrence College, presented this paper.

FOURTH CENTENARY OF TRINITY COLLEGE, CAMBRIDGE — 6
G. M. TREVELYAN

This short historical sketch is the text of a broadcast over the facilities of the British Broadcasting Corporation by the Master of Trinity College, Cambridge University.

EDUCATION WITH A DEADLINE — FREDERICK BURKHARDT — 9

This article is the text of the address given by Mr. Burkhardt upon the occasion of his inauguration as President of Bennington College.

HIGHER EDUCATION IN GERMANY — ROBERT J. HAVIGHURST — 13

During September and October, 1947, Mr. Havighurst visited all but one of the universities of the American zone, all in the French zone, three in the British zone, and two in the Russian zone. He is a Professor of Education and Secretary of the Committee on Human Development, University of Chicago.

A STUDY OF EDUCATIONAL PROGRESS — R. W. GERARD — 21

The University of Chicago is carrying on an extensive appraisal of the curriculum of the College. This article, a report of progress so far, is published to meet the growing demand for information on the techniques used in this evaluation. The writer is Professor of Physiology, and Chairman of the Evaluation Committee. The Journal will be glad to send a list of the members of the Committee to any reader who requests it. Because of limitations of space, this article has been somewhat shortened. The reprints prepared for the University of Chicago will contain the complete article.

SOCIAL PARTICIPATION — SEBA ELDRIDGE — 33

A Professor of Sociology, University of Kansas, describes the provisions for practical experiences made for students in an introductory course in sociology.

WITH THE TECHNICIANS — 38

Challenge and Retreat, reported by Donald G. Stillman, Professor of Associate Professor of English, Bucknell University; Notes from the "Survey Graphic."

CONTENTS (*Continued*)

THE REPORTER 42

Counseling service at Wayne, gifts to Northwestern and Pennsylvania, new laboratory at Rensselaer, scholarships provided by James F. Byrnes Foundation, new buildings at Minnesota, co-operative instruction to continue at Radcliffe and Harvard, forty-nine communities selected for Public Library Inquiry, Harvard Law School arranges a Treasure Room, co-operative arrangements for clerical assistance at Ohio State, grants from W. K. Kellogg Foundation for co-operative health-education project to six Ohio universities, grant from Carnegie Corporation for Asian studies, new atom-smashing equipment built at Stanford, American Brotherhood Week arranged, grant from United States Atomic Energy Commission to Western Reserve, Pennsylvania Society of Architects is arranging three symposia, regional scholarships to be awarded by Princeton, opportunities for advanced study provided by National Research Council, Rosenbach Fellowship at Pennsylvania, Magnificat medal at Mundelein, lecture series at Wayne, scientists during the war, grant for Russian studies at Harvard.

EDITORIAL COMMENTS 47

REVIEWS 49

Philosopher's Quest, by Irwin Edman; The Theory of Human Culture, by James Feibleman; There Will Be No Time, by William Liscum Borden; Scientists against Time, by James Phinney Baxter; Princeton: 1746–1896, by Thomas Jefferson Wertenbaker; Education for Ladies: 1830–1860, by Eleanor Wolf Thompson; Some Tasks for Education, by Sir Richard Livingstone.

IN THE LAY MAGAZINES v

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The Journal of Higher Education JANUARY, 1948

Philosophy and Education

By HAROLD TAYLOR

Philosophy May Give to Education the Interpretation, Appraisal, and Organization of Ideas

THE contribution which philosophy can make to education is to create a philosophical attitude. That attitude of mind is one which finds life and thought intensely interesting, refuses to accept unexamined doctrines, and has a permanent respect for the beauty and goodness of truth. It is further marked by a continual discrimination amongst values, with the ultimate aim that of all the possible experiences of human life, the ones deliberately chosen are of the deepest significance. With such an aim, the philosophical attitude can serve as an antidote against the cynical, the commonplace, the dogmatic, and the futile, giving in place of these, some notion of how to choose between the better and the worse, the false and the true, and, in the end, between good and evil.

This is not to say that philosophers, or those in whom a philosophical attitude of mind has developed, are therefore morally dedicated to noble ideals, but rather that their habit of mind is one which is self-conscious about the grounds of belief and moral commitment. The individual can then escape from narrow views, and can accept willingly the chance of error in his own judgments and the chance of truth in those of others. He can keep an active fund of new ideas moving in his own life. By raising doubts about ideas usually taken for granted, philosophy loosens the intellect, enlivens the imagination, and presents new possibilities. Philosophy in this sense brings an aesthetic content to life and education, and its reason for existing lies merely in the joy which it brings. As Walter Pater says,

> A counted number of pulses only is given to us of a variegated dramatic life. How may we see in them all that is to be seen in them by the finest senses? How shall we pass most swiftly from point to point and be present always at the focus

where the greatest number of vital forces unite in their purest energy?[1]

The function of philosophy is to make these occasions meaningful and to sustain their importance throughout the whole of life.

Yet philosophers seldom make that effort on behalf of their pupils. Owing to the educational system in which most of them have been trained and are engaged, the study of philosophy is not a means to the enrichment of life but a means to the possession of information. One of the reasons for this is pointed out by Mr. Squeers, who, in the course of some random remarks in *Nicholas Nickleby*, explains a neglected educational principle to a friend.

"Measles, rheumatics, hooping-cough, fevers, agers, and lumbagers," said Mr. Squeers, "is all philosophy together; that's what it is. The heavenly bodies is philosophy, and the earthly bodies is philosophy. If there's a screw loose in a heavenly body, that's philosophy; and if there's a screw loose in a earthly body that's philosophy too; or it may be that sometimes there's a little metaphysics about it, but that's not often. Philosophy's the chap for me. If a parent asks a question in the classical, commercial, or mathematical line, says I, gravely, 'Why sir, in the first place, are you a philosopher?'—'No, Mr. Squeers,' he says, 'I a'nt.' 'Then sir,' says I, 'I am sorry for you, for I shan't be able to explain it.' Naturally the parent goes away and wishes he was a philosopher, and, equally naturally, thinks I'm one."[2]

There are many in American society who play Mr. Squeers's game. The philosophers are those who guard the territory of a special subject-matter for initiates or, in particular academic circumstances usually referred to as cutting across fields, are willing to share their subject-matter with others who are not philosophers. There are those who conceive the task of the philosopher in his relations with the rest of the human race to be that of handing over the Western tradition to those more innocent in these matters than himself. Accordingly, a philosophy department in our modern academies is considered best equipped for its task when it contains one each of the variety of specialists who make up contemporary professional schools. There is usually one person engaged who holds modern views, in order that due tribute be paid to reality.

The assumption behind this practical structure of philosophic personnel is that since the task of philosophers is to pass on the ideas of Western culture, it would be unfair to tradition to omit any of its exposition or its exponents. As Santayana has pointed out regarding the situation at Harvard,

> I believe the authorities would have been well pleased, for the sake of completeness, to have added a Buddhist, a Moslem, and a Catholic scholastic to the philosophical faculty, if only suitable sages could have been found, house-trained, as it were, and able to keep pace with the academic machine and to attract a sufficient number of pupils. . . . You might almost be an atheist, if you were troubled enough about it. The atmosphere was not that of intelligence nor of science, it was that of duty.[3]

This is the atmosphere which surrounds the study of philosophy in our modern American colleges. The tang of original thinking, the bite of radical

[1] *The Renaissance.* New York: Macmillan Company, 1904. pp. 249–50.

[2] Dickens, Charles. London: Chapman and Hall, Ltd., Vol. II, pp. 346–47.

[3] *Character and Opinion in the United States.* New York: W. W. Norton and Company, Inc., 1934. pp. 58–59.

ideas, the excitement of the imaginative leap are all absent, and in their place we present the deliberate survey, the careful history, and a set of philosophical problems which can best be solved by the use of the memory. In the mind of each student, philosophy thus remains an opaque system of signs and concepts, acting as a cloak upon reality until penetrated by personal insight into questions raised by individual necessity.

MOST of us have some sort of memory of what happened during our own education to quicken the value of philosophy. Most of us can look back at those points in our own lives when values of truth and aesthesis broke in and made a difference to the way we thought about life and experience. For my own part, I can think of no time during my undergraduate study of philosophy when such things happened. In the classroom, aesthetic experience was a subject which had attained a place in the honors curriculum, and consequently deliberately excluded from the classroom life. In the minds of the students, philosophy became a discipline devoid of aesthetic content and incapable of exciting anything but feelings of respect and humility. It was not until two years after graduation that I caught a glimpse of the aesthetic virtue or meaning of philosophy, suddenly, in the midst of a street conversation of the kind held by characters in a Forster novel. It is only since then that philosophy has made any serious difference to my thinking or living.

I believe this to be true of others. I believe that we deliberately exclude the excitement of philosophical discovery by a perverse doctrine of intellectual purity. By profession, we assume that the function of the philosopher in a university is to provide discipline for the intellect and a wide knowledge of famous ideas. We are likely to begin with the pre-Socratics and battle our way through to Whitehead, referring to the official opinions regarding each of the philosophers as we go.

Yet philosophy begins for the individual when he pushes his plain inquiry past the immediate into places where thinking does not ordinarily go. Once there, one's thinking becomes more and more difficult and interesting, since the world is then seen to be more and more complex. It is at this point that the philosophy of some of our greatest thinkers becomes meaningful, and insights from that source most helpful. On the other hand, the imagination of the young often begins to move when it first finds one of the great philosophies and is struck by the size and depth of the ideas there. Young men and women are more interested in ideas and more sensitive to the biggest ideas they can find than at any other time in their lives. The function of the philosopher as teacher is to set men thinking. The subject-matter of such thinking is the universe, and the thinking is entitled to begin at any point in that field.

If our purpose is to set men thinking, and our hope is that the young should enjoy philosophical insight, it would be unwise to make a universal pattern of philosophical training for everyone, either on a chronological basis or upon a survey of the subject-matter of systems. There are many points of entry to philosophical study, each with its appropriate advance through its own appropriate discipline.

TO CREATE the philosophical attitude is only one task for philosophy in education. The young people we are asked to educate today are searching for positive beliefs and firm values by which they can live. They are earnest in their effort to find a philosophy which is intellectually and morally justified. Since the ultimate object of both education and philosophy is to make human action wise and good, the function of philosophy in achieving that object is to aid the education of each person toward a conception of wisdom and goodness so firmly and clearly held that it has a part in the future regulation of his conduct. The unifying set of values in education of the Western world used to be found in the Greek and Latin classics, in logic and rhetoric, and in Christian ethics. The student's whole educational career was moving toward the development of a philosophy.

In America and in England, until comparatively recent years, it was assumed that ministers trained in Christian theology were those most fitted for the moral education of the young, and that before a student graduated from college, his ideals should be formed by a course in philosophy. With the secular influence of scientific thinking during the last century, and the coming of the elective system, students were more inclined to dispense with the study of abstract morality in favor of other subjects, since the student, for the most part, held his set of moral values without benefit of clergy. Added to this, new professional thinkers, employed by universities to teach the young, were themselves interested more in logic than in ethics, more in private philosophical research than in young people. The moral influence of the philosopher has thus declined, and his effect upon the character of the young is slight in the face of amoral influences in the rest of the curriculum and the rest of human life.

It is now true that the classical unity of knowledge and value has been threatened and finally broken—in education, by the increasing strength of the natural and social sciences; in society, by the increasing pressure of material conditions, whose ultimate philosophical expression is that of the intellectual and moral nihilism of German and Italian fascism. In this country, philosophers have failed to provide either the intellectual or the moral leadership which can aid our youth to find the modern philosophy they seek. They have been concerned with other matters, with commenting upon the creative thinkers of the past, catching each other out in logical mistakes, analyzing the meaning of words, and consolidating academic position. As now constituted, the academic environment of the philosopher in America is unfavorable to original thinking, either by its professors or by its students. Accordingly, the creative gift has been lost, and we have few thinkers who speak to the world about the present condition of man. That task is performed outside the academies, by journalists, novelists, scientists, clerics, poets, and politicians, each of whom is helping to make a modern synthesis, but without the breadth, nobility, and depth of perception which is the mark of the creative philosopher.

There is a variety of reasons

for the failure of philosophy. It may be that the enormity of the contemporary task is too much for any thinker. It may be that the change in the material conditions of human life as a result of scientific discoveries in the social and natural world is now so immense that no intellectual or moral ideal has any relevance or power. Yet the responsibility remains, and there are ways of meeting it.

ONE way would be to reorganize the academies so that creative thinking could grow there. There is common agreement that within our universities the separation of the field of knowledge into special disciplines is useful for the advance of research within each area, but harmful to the total education of the student. It is for this reason that most of our current educational reform is concerned with combining separate forms of knowledge into more general forms. This is our attempt to restore the unity of knowledge and value. Yet it is doubtful that such rearrangement can restore unity until we have found a philosophy by which the field of modern knowledge can be organized. Otherwise, neither our education nor our students will have a philosophy.

There are those who propose that the unity of value be found in a revival of the classical synthesis, in which absolutes can be rationally perceived, and a medieval universalism provides a total explanation for the variety of human life and knowledge. The classical proposal has the advantage that it does restore the function of education as that of developing a common philosophy of life. The difficulty in accepting this proposal is that not only is it reactionary and authoritarian in its implication, but it is naïve. That is to say, it shows a philosophical innocence which bears no disguising, and which, in its boyish acceptance of a simple set of rational concepts, ignores the difficulties and complexities of the entire philosophical enterprise. It ignores, in addition, every new discovery which has been made about man and nature during the past two hundred years.

Until very recently, all the great systems of philosophy have been rationalistic. They conceive reality in rational terms, and insist that certain logical forms must be observed before the real becomes a legitimate object of knowledge. With this conception of mind and reality, education has been organized according to a logical discipline which serves to sustain all the inert and active ideas of the past with equal enthusiasm. The anti-rationalism, the philosophy of organism, although they have influenced deeply the contemporary art forms and appear in new forms of music, sculpture, painting, poetry, and the dance, have so far had little effect upon the forms of higher education.

The philosophy which can provide the needed unity for education in a modern world is that of organism and of process. If the total educational process is considered as a growth toward a mature philosophy of life, then each part of the process must be organically related to that central ideal.

In a very real sense, every course becomes a course in philosophy, since its purpose is to teach students to think critically and wisely about man

and nature. The philosopher, on his part, can explore with his students any aspect of the universe in which he and his students find philosophical problems. It is, therefore, not necessary to attempt a unity of knowledge by insisting upon a survey of all knowledge. What we must insist upon is that the mind is not passive, that education is not for stocking the memory, but that each part of education is an attempt to enable the mind to use ideas and values which are significant to life in the present, and to enable the individual to make his own relations amongst those ideas and values. This means that the emotional impact of an idea, or its aesthetic perception, is of basic importance to an understanding of its meaning. Its validity, its truth, its relation to other ideas must be understood by an activity of the individual who experiences it, not by certain rational activities of his teacher.

Philosophy can therefore contribute to education its insights into human nature and its discrimination amongst human values, and can help to frame new propositions about man and nature, in order that the educational process may form itself around fresh and active ideas. When the philosopher takes as his task, in the academy or elsewhere, the attempt to think creatively about the moral, aesthetic, and metaphysical problems of modern life, he will set men thinking. Thus, he will take up again the rôle he has dropped. He will help to revive the enquiring mind at a time when the weight of controlled opinion is stifling it.

[Vol. XIX, No. 1]

Fourth Centenary of Trinity College, Cambridge

By G. M. TREVELYAN

ON JUNE 3, 1947, the fourth centenary of Trinity College, Cambridge, was celebrated, and His Majesty the King, himself an old Trinity man, was present and proposed the health of the College.

Probably most of our foreign friends are rather uncertain about the precise nature of Trinity College, Cambridge, because the system of residential colleges is, I believe, almost unknown outside of England. It is indeed almost unknown in the British universities, except Oxford and Cambridge. In Paris and some of the other older universities of Europe, there used to be such residential colleges for students, but they have nearly all disappeared. In Oxford and Cambridge alone, they continued to flourish and they flourish still.

At Cambridge, all the students and nearly all the professors and lecturers are divided up among twenty colleges, of which Trinity is the largest and, I think, the most famous, though St. John's College runs it close. There are about five thousand students in

Cambridge University, of whom about seven hundred are attached to Trinity.

The academic system at Cambridge is a federal system. The twenty colleges compose the University. Every member of a college is also a member of the University and subject to its laws and regulations. But almost every member of the University is the member of one or other of the colleges and is subject to the collegiate laws and discipline. The student lives in his own rooms in the courts of his college, or else in lodgings outside but still subject to college rules, and dining in the College hall.

We conceive that there are certain advantages in this system. In the first place the College can exert such mild control and discipline over the students as is suitable to grown men; at present the majority of our students are men between twenty-two and thirty years of age who have returned from service in the late war. In normal times the average age of boys coming up from school to college is eighteen to twenty-two. At any rate, there is some one responsible for each student in the college, to whom he can apply in case of personal difficulties; at Trinity we have four college tutors whose business this is. The college also gives private instruction to a man in the subject he is studying. On the other hand, the lectures which the students attend are not college but university lectures, open to members of all the colleges—as also are the scientific laboratories.

Another great advantage that we see in the college system is this. It enables men studying quite different subjects—some doing mathematics or science and others history or languages or law—to live together in one society and enjoy ample opportunity in ordinary daily intercourse to interchange ideas and knowledge. These social conditions mitigate to some extent the extreme specialization of modern studies. This is equally true both of the students and of researchers, professors, and lecturers. I am and have always been an historian but when I was a student, more than fifty years ago, my chief friends in Trinity College were young men studying philosophy, economics, and science; and one of them, Vaughan Williams, was a musician. And now that I am Master of the College, it is my privilege to live in the same society with men of science like Adrian, Bragg, and Taylor, as well as with other historians, lawyers, and teachers of languages old and new. This mingling in one friendly society of men studying very different subjects is the essence of our residential college system. A college in Cambridge does not mean a college devoted to one special subject or faculty, but a college where students and teachers of the most different subjects mingle and are friends.

The college also has the advantage of rendering easy and customary personal friendship between young and old, between teachers and taught. Trinity is, as it were, a great family living in an ancient home. A domestic element is introduced into academic life, with meals in common, and club rooms for young and old. Married members of the College have of course to live outside it with their wives, but the married Fellow or student comes into the College and very often takes his meals in the great Elizabethan hall of Trinity with his fellow students or fellow teachers. Athletics of all

kinds and boat-racing on the River Cam are organized by the different colleges on a basis of college rivalry.

TRINITY COLLEGE was founded four hundred years ago by one of the greatest of our English kings, Henry VIII. He amalgamated two older colleges into one great college, and he multiplied their joint income fourfold from the wealth of dispossessed monasteries. That made Trinity the richest of the Cambridge Colleges, and subsequent benefactions by old Trinity men have maintained it in that fortunate position. Consequently our endowments have enabled us, down the ages, to maintain many scholars, of low-income families, and a great number of older Fellows of the College. Today, the State further subsidizes our efforts by sending up many students paid for by the public authorities. But there always have been, and still are, many students who pay for themselves, or whose parents pay for them. Indeed, in the days of aristocracy, many of the English aristocrats came to Trinity, including Lord Byron.

Probably Trinity College is best known abroad as the College of Newton. He came up here in 1661 as a poor student on College endowments, was much encouraged and helped by the College authorities, and did all his great mathematical and scientific work in his chambers in the Great Court of Trinity. After 1694, when he went away to live in London, he had ceased to be interested in scientific work. But his disciples, Coles and Smith, patronized by the master Bentley, the great classical scholar, made the Newtonian philosophy the principal subject of study in Trinity and in Cambridge during the eighteenth century. Since then we have had in our College such great men of science as Whewell, Clerk Maxwell, Michael Forster, Rayleigh, J. J. Thomson, and Rutherford.

Our Latin and Greek scholars have included Bentley, Porson, Munro, Jebb, and Housman. Among the historians have been Macaulay, Maitland, and Lord Acton. Sir James Frazer, the anthropologist, wrote *The Golden Bough* within our walls as a Research Fellow of the College. Our judges have included Sir Edward Coke and six lord chancellors, among them the great philosopher, Francis Bacon. Six prime ministers have been Trinity men. And last but not least, the poets who spent their youth at Trinity include not only Byron, but Andrew Marvell, Cowley, Dryden, Alfred Tennyson, and Edward Fitzgerald. Tennyson's friendship with Arthur Hallam, the subject of his great poem, *In Memoriam*, was a friendship formed at Trinity. Lord Lytton and Thackeray, the novelists, were also of Trinity College.

All these and countless other memories and traditions are enshrined for us in the noble college architecture of the sixteenth and seventeenth centuries, the Great Court, and the Cloisters and the Library that Sir Christopher Wren designed. Trinity has not only a great tradition; it is also a visible set of buildings.

Education with a Deadline

By FREDERICK BURKHARDT

The Dangers of the New Age Give Urgency to Wise Action

THERE is a common awareness that a new age has begun for mankind. There is no joy in this awareness, however, because its birth was marked by the destruction of an entire city, an event which gave immediate testimony of the hideous possibilities of the future. As a result, there is also a common awareness of a great deadline. I do not, of course, mean that anyone knows its precise date. I mean to convey by the figure only the general sense of urgency, the feeling that something must be done before it is too late. "Too late" will be the day the third world war breaks out. This is the deadline we are working against.

Not everyone is sufficiently clear about this, it seems. There is still a good deal of discussion about war and peace which displays habits of mind that stem from pre-atomic and pre-bacteriological days. Take a statement, for example, which appeared recently in *Life*, in an article advocating a program for a new balance of power system:

> The first specification for our kind of world is not peace but freedom. . . . Next after freedom comes justice, for large numbers can enjoy freedom only in a frame of order. Peace comes third. Peace we need and yearn for, but peace comes third, because, if freedom and justice lack, we shall not ourselves be peaceful.[1]

This might have been maintained in 1944, but not today. Today peace comes first, because freedom and justice require civilization and the human species, and modern warfare can wipe these out. At least this is so if we can believe the current prophets of doom. And in this regard it is significant that it is precisely the best informed who are most alarmed. Cassandra nowadays sits in high places; she has degrees from many universities and has done research in nuclear physics.

It is important to be clear about the nature of our deadline because it makes a great difference in what we think and do about meeting it. It is one of the major concerns of educators today to help in achieving this clarity. But to define the nature of the deadline and to develop its implications, though important, is not the whole concern of educators. They must also work against it.

Now deadlines are particularly uncongenial to educators, not only because they are accustomed to the long view, but because in times of great cultural stress and crisis the ways of reason are notoriously difficult.

[1]Poole, DeWitt C. "Balance of Power," *Life*, XXIII (September 22, 1947), p. 77.

They have, however, worked against them before, and have responded to the challenge in their own way. The Hellenistic period, for instance, comes to mind at once, because when the great "failure of nerve" swept the Greco-Roman world, educators worked under psychological conditions very similar to our own. The City State had fallen, and with it the traditional faith. In describing the generation living at the beginning of the period, Gilbert Murray sums up the work that lay before it as follows:

> They had to rebuild a new public spirit, devoted not to the City, but to something greater; and they had to rebuild a religion or philosophy which should be a safe guide in the threatening chaos.[2]

Looking back on how this work was done, we can now observe an agreement which pervades the many different teachings of that tragic age. In all of them the focus of education was shifted from social and political concerns to an individualistic ethics and to philosophies of individual salvation.

This was the response of educators of the past to their deadline. Is there anything comparable going on in education today? I believe there is, and that the modern response shows as clear a direction as the Hellenistic one.

FROM the remarkable amount of activity in educational circles today, clearly something is being done. Despite the pressure of great numbers, which makes it difficult even to carry on as before, there is in our schools a widespread determination to change educational ways and make them more meaningful. And when one surveys the many new plans for revision of the curriculum, one can, I think, see evidence of a common theme running through them.

The common theme is the demand that education today must provide a science of man which is commensurate with our knowledge and control of nature. It stems from the realization that the science of nature has outstripped our knowledge of man, that now invention has become the mother of necessity. It is this urgent attempt to beget a science of man that runs through the plans for general education, through the plans of engineering colleges to include more of the liberal arts, through the shift to required and basic courses, through curriculums consisting of great books, and through the incorporation of religious teaching in our schools. This agreement is so clear and so widespread that it can, with justice, be said that the search for the science of man constitutes the response of modern education to the deadline.

As in Hellenistic times there were great competing schools of thought, so today there are deep-going differences among educators, differences which arise from their convictions as to how the science of man is to be achieved. On this issue there are two general sides. One group believes that the science of man is already complete, that it is stored up in the accumulated wisdom of the past. Most of the plans I have mentioned share this assumption, and it is on this side that the preponderant forces are to be found among educators. The other group believes that the science of man has only begun to be worked out, that it will come only as a result of the application of scientific

[2] *Stoic, Christian, and Humanist.* London: C. A. Watts and Company, 1940. p. 93.

methods of research to our social problems.

The conflict between these groups is often more apparent than their agreement in the common quest. It has produced much lively, and some illuminating, controversy. But it has also on occasion seriously affected decisions in matters of educational budgets and the spending of public funds for educational advance. Recently, for example, when a bill establishing the National Science Foundation was passed, all the sections relating to research in the social sciences were eliminated. The reasons for excluding them from the benefits of the greatest piece of legislation yet devised for the advancement of learning were various. But in a careful analysis of the testimony at the hearings, published in the *Scientific Monthly* under the title "The Senate Ponders Social Science," George Lundberg concludes:

> . . . there is always in the background of the testimony reviewed, the traditional view that, after all, we know the solution of social problems through the historic pronouncements of seers and sages, past and contemporary, and all that is needed is more education to diffuse this lore and arouse moral fervor in its behalf.[3]

This statement has a polemical tone, due no doubt to the fact that the author, who is a social scientist himself, is profoundly disturbed by his findings. But the evidence he has collected in the article bears out the general conclusion that this attitude did in fact prevail among many of those who gave testimony, and this group included a large number of educators.

[3] LXIV (May, 1947), p. 409.

The final Bill, as you know, was reluctantly vetoed by President Truman because of the administrative difficulties it presented. It will certainly be revised for the next session of Congress, and this will give another opportunity for the inclusion of the social sciences. This time, it is to be hoped, the testimony of educators will reflect the realization that, in the face of the deadline, it is dangerous to be so sure that we have the answers in our books that any other efforts to get light on our problems can be discouraged or allowed to die. This time, it is to be hoped, their testimony will reflect the common quest for the science of man rather than the different positions within it.

SINCE the group whose testimony discouraged the inclusion of the social sciences in the bill evidently has a great respect for learning from the past, and since so many of them were physical scientists, it may be instructive in this issue to go back about three centuries to the time when modern experimental science, now grown so healthy, was struggling to be born. The parallel to the present situation looks alarmingly close. In those days, too, there was in the universities the general conviction that their accumulated wisdom was sufficient. In reading the works of the supporters of the new way of knowing, like Bacon, Descartes, Galileo, and many others of their time, one is impressed with the bitterness of their attacks on "school learning." It is safe to infer that the silence in the records of the universities of the time was due to smugness in their own wisdom and disdain for the new, rather than to lack of awareness that

they were being criticized. Martha Ornstein, who has done able research on this question in a book called *The Rôle of the Scientific Societies in the Seventeenth Century*, comes to the following conclusion:

> It thus would seem from the slight progress of the universities along lines of experimental science, from the fact that the greatest scientists of the age were not affiliated with them, from the many criticisms leveled against them and from actual evidences of their conservatism, extending even into the eighteenth century, that the universities in the seventeenth century did not lend to science that encouragement which it needed in order to take root in them.[4]

I do not, in recollecting this unhappy page in educational history, wish to be understood as suggesting that the universities have not changed a great deal since that time. As Miss Ornstein says:

> The universities today have little more in common with those of the seventeenth century than the name, their general organization, and a few formalities, such as conferring degrees. The resolution in the universities which caused them to assimilate the changes sketched above, making of the university professor a modern scientist, has been the task of the two centuries which have elapsed since the seventeenth and in a most real sense is still the task of our own time. This revolution has made and is making universities homes of free thought, of scientific research and instruction, places where matters most intimately connected with everyday life are fostered.
>
> It was the unmistakable and magnificent achievement of the scientific societies of the seventeenth century not only to put modern science on a solid foundation but in good time to revolutionize the ideals and methods of the universities and render them the friends and promoters of experimental science instead of the stubborn foes they had so long been.[5]

That battle has been won. The question now is whether there is not a new one for the encouragement of an infant science of man.

The social sciences are, it is true, included in our university curriculums today. But when one considers the support and attention they have received before and after the science of man became the great common educational concern, there is not the great increase one might expect if they were really seriously regarded as having promise.

The real strength of my historical analogy depends, of course, on whether the case of social science today is really as good as that of natural science in the seventeenth century. It is my own conviction that it is, in the sense that I believe that hope does lie in the direction of the extension of scientific method to the problems of men. I do not, however, wish to defend this personal conviction, because, in view of the deadline, it is not so important that we agree that their case is the same as it is to agree that we cannot be sure it is different. It may be that the confidence in our accumulated wisdom is justified, but present confidence is not a substitute for results which are not yet achieved. So long as this is so, we must follow all possible leads. This is the great difference that the deadline makes.

Let us, therefore, carry the quest in both directions. By all means, let us scrutinize the past for answers. By all means, let us read the great

[*Continued on page 54*]

[4] New York: Columbia University, 1913, p. 300.

[5] *Op. cit.*, p. 304.

Higher Education in Germany

By ROBERT J. HAVIGHURST

Drawn from a Report on Present-Day Education and Social Conditions Prepared for the Rockefeller Foundation

MOST of the German universities opened in the spring of 1946, about a year after the close of hostilities in Germany. Within a year, they were all operating with overflow enrollments, although understaffed, and, in most cases, with buildings badly damaged. By the spring of 1947, the absolute limit on enrollment had been reached, and every university was turning away many more applicants than it could accept. In fact, the pressure was so great that less than one in five qualified applicants could be accepted. Every German university in the three western zones now has an enrollment from 50 to 500 per cent greater than before the war. The University of Munich, operating in a plant at least half destroyed by bombs, has 10,500 students and a faculty about two-thirds the pre-war size. Erlangen, with twelve hundred students before the war, now has six thousand students in a plant which was not bombed. Heidelberg, with forty-four hundred students, now has only two-thirds the number of instructors who before the war taught twenty-one hundred students. One entirely new university has been established under French protection at Mainz, and now has five thousand students. The entire number of German university students is conservatively estimated at 175 per cent of the pre-war enrollment.

The increase in university enrollment in Germany is due to three causes. First, there is a ten-year backlog of students. The group who finished secondary school in 1935 and 1936 went immediately into the required work service, from there into the military service, and from there into the war. Those in this age group who survived the war, about 50 or 60 per cent, were ready for university work in 1946.

The second reason for increased enrollment is that money is relatively plentiful in Germany, and there are few ways to spend it. Consequently, any family that can spare 100 or 150 marks a month is inclined to spend it on university education for its young people, on the theory that this is a useful investment of money which could not be invested in any other way, and could not buy anything except a few items at black-market prices.

The third cause of increased enrollment is that there are few attractive alternatives to college attendance for young men and women today. Retail business, which would normally attract many of them, is almost dead in Germany since there are very few consumer goods or places to sell

them. Industry, which is operating at one-third to one-half its pre-war level, is not making urgent demands for young manpower. Consequently, young people are inclined to invest their present years in education, hoping that opportunities will be greater when they come out of the university.

The pressure of students for admission to the universities is creating a problem of student selection. This is being met by raising entrance standards and by establishing criteria for dropping students who are not doing satisfactory work. Entrance standards are raised usually by the simple device of admitting only students with high marks in the secondary-school leaving examination. There is also a much-disputed selective procedure in the universities of the Soviet zone which involves an oral examination and gives preference to children of working-class parents. There is some talk among university entrance officials of using tests of the American type, but so far no one has ventured in this direction.

The time-honored practice among German students of "pretending" to study while having oneself a good time is causing some worry but seems really not to present a serious problem. For example, one hundred students at the University of Munich, chosen at random, were given a surprise examination to find out whether they were working on their courses. Only two failed to make a creditable showing. Most universities have now established some kind of check on the progress of students, either through an examination at the end of two or three years of university work, or some alternative scheme.

THE present-day student body of the German universities differs from the pre-war student body in much the same way as does the American student body. Students are older, the modal age for German university students being about twenty-five—many of them are married. The proportion of women students is about 20 to 25 per cent.

About one-fourth of the male students were wounded during the war. There are three categories of wounded men, of which the third, known as "severely disabled," have lost an arm or a leg or are blind. The number of male students in this category varies from 8 to 12 per cent. A special dining room is usually provided for their use.

Students who have been active in Nazi organizations such as the Hitler Youth, or in certain categories of the army, are limited to 10 per cent of the total enrollment. However, there seems to be no particular limitation on the number of former army officers. In the summer semester of 1947, five per cent of the men at Goettingen had been regular army officers, which means that they had entered the army as a career before the war; 32 per cent were reserve officers, which means that they had not gone into the army as a career but had served as commissioned officers. Only 6 per cent of the men had never been in the armed services.

There is a great deal of discussion in Germany of the desirability of extending greater educational opportunities to children of parents in the lower economic groups. Accordingly, it is of some interest to note the social and economic status of the parents of university students. This

does not vary a great deal in the ten universities from which the writer secured data. The number of children of semi-skilled and unskilled workers varied from 2 to 4 per cent. This proportion is the same as the pre-war figure. Another 3 per cent to 8 per cent are the children of farmers. The overwhelming majority are children of middle-class business and professional people. To the extent that it is desirable to increase the proportion of workers' children immediately in Germany, some provision will have to be made to admit students who have not attended secondary school, since practically all workers' children go to elementary school and are not eligible for entrance into the university. The universities in the Soviet zone have made provision for admitting young persons without secondary-school diplomas who seem to show promise. Leipzig, for example, had enrolled some 20 per cent of the students in this category in the summer of 1947, and this number was to be doubled the following winter.

In the University of Berlin there is a controversy over the procedures for admitting students. An admission committee, which includes trade-union and political-party representatives in addition to representatives of the university faculty, passes on student applications. The committee interviews the prospective student concerning his family background and his political affiliations. Since only one in ten new applicants can be accepted, there is a great deal of criticism of the selective procedure by unsuccessful candidates and their friends. This is true in practically all universities, but in Berlin it takes the form of charges that people with communistic leanings are favored for admission. The American occupation authorities seem inclined to agree with these charges, while the British occupation authorities do not take so much stock in them. The officials of the University of Berlin argue that no personal favoritism is being shown but that a policy which has generally been adopted by the occupying powers is being implemented in the selection procedure, namely, that the proportion of students from families in the lower economic levels should be increased. In other words, the Berlin university authorities argue that they systematically favor students from working-class families, and not students who express communist views.

New students at the University of Berlin are asked whether they belong to any political party and, if so, what party. Since they are practically all over twenty-one, and many of them as old as thirty, it might be expected that there would be a great many students with political affiliations. However, only about one hundred out of forty-five hundred reported that they belonged to the Socialist Unity Party (SED), which includes the Communists as well as a good many Social Democrats. The great majority of students reported that they belonged to no party. Nine per cent of the students came from workers' families, a somewhat larger proportion than is found in universities in the western zones; 60 per cent of the students came from families in the upper-middle class. Students of different faculties or schools show difference in family background. The medical students come predominantly from families of higher social status than students in the recently formed schools

of business and pedagogy. Thirty-one per cent of the students who are enrolled in the School of Pedagogy come from workers' homes. In order to admit such a large proportion from working-class homes, the University has created a two-year preparatory school for students who have not attended secondary school. In two years of hard work, mature students who left school at the age of fourteen or fifteen are able to bring up their level of general education to university admission standards.

Student life is different from what it was in the old days. Dueling and beer parties are extinct. The writer's experience in the student dining hall at Heidelberg, the home of the "Student Prince," illustrates the difference. The Mensa, or dining hall, is a long, low-ceilinged room with seats for about a thousand. Students lined up to be served, cafeteria fashion, with a choice of two dishes. One was a meat stew with potatoes, containing a small piece of beef which represented half of the meat ration for the week. Thus this dish could be selected only twice a week. The other dish was a sour concoction of stewed cucumbers and flour paste, without fat or seasoning, and three green and soggy potatoes, boiled in their jackets. For the students it meant their only hot meal of the day; it represented two-thirds of their energy intake for the day. They ate it in stolid silence, cleaning up the last spot of sour gravy skillfully with motions which showed that they had been trained to leave nothing edible behind. In the long low room, a thousand students sat and ate silently, and silently rose and gave their places to another thousand who waited as silently in line. There was no festivity, no cheerful conversation, no lighting of cigarettes when the meal was over.

The Heidelberg student-welfare organization has drawn up a list of the most pressing needs of the students. Leather for shoe soles heads this list, followed by men's trousers, underwear, pencils, and twenty-five sheets of paper per student. Because of the paper shortage, books also are scarce—so scarce that they are largely disappearing from the free market and may be obtained only by bartering other books or by paying black-market prices. On the rare occasions when a shipment of new books arrives, students buy them indiscriminately, knowing that they can use a book for trading purposes if they cannot use it themselves. To get around this problem, instructors have arranged with booksellers to sell the books only to students who have a certificate from an instructor authorizing them to purchase certain books.

THERE are four universities which were essentially undamaged by air raids: Heidelberg, Erlangen, Goettingen, and Tuebingen, but the physical plants of these universities are sadly run down. For example, there is a severe shortage of electric light bulbs. It was said that the university library at Goettingen has only fourteen light bulbs instead of the several hundred it required.

The remaining universities are from 50 to 80 per cent destroyed. Of 82 lecture rooms in the University of Munich, for instance, 26 are now usable. Where much construction work is necessary, the students have to do a great deal of the work. All of the universities which were damaged

require every student to contribute a minimum of about ten days a semester to the clearing of rubble and to reconstruction. There are several universities, including Munich and Freiburg, which require the prospective student to work in the "building brigade" for several months before he is permitted to attend classes. He is paid for his work during this time. The Engineering School at Stuttgart, finding itself in need of bricks for reconstruction, sent a crew of students out to help with their manufacture. In this way, the school secured more bricks than it needed, and traded its excess for cement and other building materials.

By this time, most of the universities have brought back into use the rooms which could most easily be repaired and are now engaged in the more fundamental repairs, such as permanent roofing and restoration of walls. There has not yet been any attempt at construction of new buildings in place of those which are so completely wrecked that they are beyond hope of repair.

In only one place, Heidelberg, are university buildings being occupied by military authorities. At Heidelberg, the new university building, which contains a large number of fine lecture rooms and was paid for by a group of Americans headed by Jacob Gould Schurman, was taken over by the United States Military Government for the use of its educational program for its own forces. Over the main entrance of this building is an inscription reading "To the Everliving Spirit," which was changed by Hitler to read "To the German Spirit" but was later restored. In front of the inscription now hangs an illuminated sign, somewhat like the marquee of a small moving-picture theatre, which reads STATES. This sign is a subject of controversy between the university officer in the United States Military Government and the information branch of the Army. The university officer charges that it is bad taste, and almost a desecration, to hide the German inscription with the crude American sign. However, the American officials have just turned over nine lecture rooms in this building to the University of Heidelberg, and at present an interesting experiment is in progress, involving joint use of a building by occupation authorities and the German university students. The Rector of the University said that he was pleased with the situation at the moment, because the Americans will heat the building, whereas the University could not possibly heat it during the winter.

THE typical German university faculty now consists of a large group of men over sixty, a similar group of assistants and docents under thirty-five, and a very thin distribution of professors between thirty-five and sixty. The actual size of the faculty is in all cases less than it was before the war. Heidelberg, for example, had 171 instructors in the summer semester of 1947, as compared with 233 in 1939, when the enrollment was approximately half the present enrollment. The reason for the small size of the faculty is that a considerable number of faculty members were dismissed for National Socialist affiliation at the end of the fighting, and relatively few persons with acceptable scholarship and satisfactory political

records have been found to take their places. An extreme case is that of the social-science group in the University of Heidelberg, which consisted, before the war, of 18 persons. All but one of these men were discharged. Alfred Weber, who had been dismissed in 1933, was reinstated, and since that time two more professors have been secured.

The process of "denazification" hit the German universities hard because, after 1937, it was practically impossible to hold a position in a German university without being nominally a member of the National Socialist Party. Since the German universities were state institutions, the faculty members were state employees and were therefore especially vulnerable to pressure from the National Socialist Party. A few of the old men in certain departments seem to have resisted successfully the order to join the Party, but practically all young and middle-aged men either joined the Party, or were discharged in 1937 if they had not previously been members. All such men were disqualified for teaching when the universities reopened, until such time as they could prove to a denazification tribunal that they had joined the Party under duress. Quite a number of men have been reinstated through this process, but faculties of certain schools have lost large proportions of their members who will probably not be reinstated under the present policy. Those faculties which had the largest proportion of active Nazis were law and medicine.

A great many of the men who have reached the retirement age—sixty-five to seventy—are still carrying a full load of teaching. At Heidelberg, Alfred Weber, for example, is about seventy-five, and Sommerfeld at Munich is about seventy-nine.

The German university professor normally receives a salary of 1,000 to 1,200 marks a month, of which 400 or 500 marks are deducted for income tax. Salaries are being paid regularly. In the Soviet zone, the practice is to award a refund of the fourth quarter of the income-tax payment in recognition of distinguished service to society. Most professors receive this award.

IT IS possible to evaluate the present status of German universities from two quite different points of view. One must admire and marvel at the personal effort and sacrifice which university people have made to restore the great German universities to the status they occupied before 1933. With twice as many students and often only half as many instructors as before the war, and in buildings which are seldom heated and often exposed to snow and rain, the work has been resumed and carried forward. The prevailing spirit was epitomized in the remark made by the Director of the Botanical Institute at Freiburg, a courtly gentleman of sixty-five whose Institute had been struck by only one bomb, because it lay on the outskirts of the city, and was only about one-third destroyed. He had to find space in his building for the mathematicians, the chemists, the zoologists, and members of two other departments all of whom had been bombed out of their own buildings. His own department was crowded into three or four small rooms, but he was able to keep a small amount of research going. He said without

bitterness: "We are crowded but the important thing is this, *Man kann wieder arbeiten.*" This simple statement, "One can work again," represents the basic attitude of the German university man. He had bound up his life into a neat package of work habits which was broken apart by the war and the bombings, and which he has been able to tie together again.

If one wishes to evaluate the German university by asking what leverage it has upon modern social, political, and economic life, what responsibility it is taking for leadership in these areas, one must give a negative judgment. This judgment is being given by a few German leaders. One of the ablest of them, Adolph Grimme, minister of education for the state of Lower Saxony, spoke in October, 1947, to a conference of students in Hannover on the subject of political education. He said in part:

One of the urgent problems of our universities is the political education of the German university man. Such education is made difficult for the reason that democracy, for which we wish to educate, is handicapped by the fact that twice in the history of the German people it has been injected from without into our society as a program and a goal, so that the impression is given that this growth is something foreign to the German soil. This handicap is heightened by the fact that the flower of democracy is expected to blossom at a moment when we cannot have a real democracy—when we can only talk about it, while it remains an empty form. It is essential that our university teachers, if they speak of democracy, should inform their students that what we have today is not democracy and cannot be democracy.

What does it mean, to be a democratic person?

It means to be a person who determines his own affairs and is responsible for them. We can be such self-determining people only when we determine our own economic and other policies. To democracy belongs essentially also the concept of the responsible executive. As long as Germany has no executive, it has no functional democracy.

Another difficulty lies in the fact that our universities have had the illusion that scientific knowledge and politics can have nothing to do with one another: an illusion that created a fatal misfortune for our people in the time of the Weimar Republic. It is desirable that the university should hold itself aloof from partisan political struggles, but it is unimaginable in the present situation that the future university-trained man should be without political schooling. . . . Democracy is not an affair which is distant from scientific thought and inquiry; on the contrary, democracy contains ethical axioms which are a part of the business of scientific inquiry. I will mention one such axiom. Our ears have been bombarded during the past twelve years with the slogan, Only that is good and true which is useful to society. But that is neither a law of democracy nor of science. The axiom which the man of knowledge should place before his student is: Only that which is true and good is useful to society.

Such laws have nothing to do with democracy as party politics. They deal with eternal basic rights of men and of human life, and if higher education has a purpose in this respect it must be to open the eyes of the oncoming citizen to the fact that he has scientific grounds on which to stand for the freedom and the worth of the individual. It would be good if in our universities we would think through these basic questions which are of political as well as scientific nature, so that we might free ourselves from the

illusion that our higher schools have no business with this kind of politics.

CERTAIN changes are now in progress, growing out of the desire for reform inspired by liberation from Hitler. There has been a move to make the university accessible to children of parents in the lower economic groups, through reduction or elimination of tuition fees. This is being accompanied by changes in the lower-school systems to encourage the ablest children to enter and complete the secondary school, regardless of their parents' economic status.

The universities of the Soviet zone have established economics faculties or divisions somewhat analogous to American schools of business administration, which train students for work in government or private business. Although somewhat similar training can be secured in some of the universities in the western zones, it has not been promoted by the establishment of separate faculties.

Another change which has been more far-reaching in the Soviet zone than in the western zones is the establishment of faculties or schools of pedagogy. This has come about in response to a four-power directive from the occupying powers ordering that teacher training shall be raised to the level of university work. In the past, elementary-school teachers were trained in normal schools that drew students from the elementary school at the age of fourteen or fifteen and gave them a teacher-training course of four or five years' duration. All universities in the Soviet zone now have pedagogical faculties. One university in the British zone, Hamburg, is starting to train teachers for elementary schools in an Institute of Pedagogy. None of the other universities has yet moved to meet the directive of the occupying powers, resistance to which is strongest in Bavaria in the United States zone.

There is at present a fundamental controversy in the German universities between those who wish to restore the institutions along the pre-Hitler humanist lines, with emphasis upon the classics and the classical languages, and those who wish to place the emphasis upon the study of the present-day world—its political, economic, and social structures and processes. Under the leadership of the older men who now dominate the faculties, the universities of the western zones have been re-established essentially along the old lines. But in the next five to ten years the power will shift to a group of young men in their thirties who will shape the universities as part of the new Germany. They will have to make the decision.

A Study of Educational Progress

By R. W. GERARD

In the College of the University of Chicago

NEXT to warfare, education is probably the most extensive undertaking of civilized man and, along with science, the most constantly maintained. The efficacy of battles is consistently evaluated in terms of objective criteria; research processes are steadily modified in terms of their performance. Although some of the detailed techniques of education are being studied in this manner, the over-all impact of the educational experience on its subjects has received but scant attention. The continued debate about educational strategy is evidence that opinions regarding it are still formed on the basis of hunches rather than of knowledge.

The problem is especially serious at the level of general education, for few colleges have clearly analyzed objectives and none has adequate evidence as to the attainment of them. The evaluation study of the General College of the University of Minnesota indicates that some specially designed courses in certain general-education fields imparted to the students taking them, not even an increased knowledge of content. Also, the report of the North Central Association Committee on Post War Education found that four-fifths of the three hundred institutions of higher education in its territory were formally reconsidering their curriculums; two-thirds were unsatisfied with their objectives, even though half had made significant changes within two years. There is a burning need for the evaluation, for objective, extensive, continuing measurement of the American college. Only as educational hypotheses and methods are tested for their results, can they be subjected to rational experimentation and to continuing effective modification. This is the scientific way.

Such considerations prompted the faculty of the College of the University of Chicago in the spring of 1943 to pass, along with the hotly debated new curriculum, the regulation that

> . . . a permanent committee be set up with the specific obligation of studying the operation of the College curriculum, of reporting its findings to the College Faculty annually, and of recommending alterations in the light of these findings as frequently as seems desirable.

A study was, accordingly, conceived within the following broad outlines. Students planning to enter the College of the University of Chicago, at the eleventh or thirteenth school year, were to be identified when possible while still in high school. Each was to be matched as closely as possible with two others in his class, one expecting to attend another college and the other expecting to end his schooling with high school. The members of each triad were to be matched on ACE (Amer-

ican Council on Education) profile, race, sex, age, religion, high-school record or performance on initial tests, and perhaps family economic and cultural background. The status of all students entering the study was to be assayed at the start, at two-year intervals for four or six years, and at progressively longer intervals for another decade. The assay was to be as thorough as instruments and resources permitted, including written tests, interviews with the student and his family, questionnaires, and so on. Further, the student's activities, curricular and extra-curricular, were to be noted during the study.

A realistic, yet quite satisfactory, procedure was generally adopted, and tests for aptitude and achievement, most of them specially constructed, were given to high-school classes (the whole class or, generally, the upper fraction of a class representing the ability range of our students) at the end of their tenth or twelfth year or to classes starting the eleventh or thirteenth year. The high schools chosen were mainly those which sent a considerable contingent of students to the University of Chicago College.

THE Evaluation Committee spent over half a year of Saturday afternoons clarifying its notions of the objectives of liberal education. This is a significant fact, since the College faculty had debated these matters intensively for a year and had adopted a curriculum tailored to its supposed objectives. Yet the dean of the College, the dean of students, the examiner, and other informed persons found further analysis essential to a meaningful evaluation.

The rôle of evaluation was especially well illustrated last spring, when several institutions among the colleges recently invited to join the study reluctantly indicated that they needed first to formulate their own aims more rigorously. Nor was this, apparently, due to apprehension that the study developed at the University of Chicago might be unduly slanted toward its peculiar objectives. In an effort to overcome a local bias in defining objectives and creating instruments to test attainment, the Committee, in the spring of 1946, held a three-day meeting which was attended by representatives of twenty interested or co-operating high schools and colleges.

It is impossible to give details in this paper; a full report of plans, procedures, instruments, administration, results, and interpretations is still premature. Yet some statement, especially of objectives, is still essential, and we ask tolerance for any categorical flavor which results from absence of detail, of rationale, and of qualification. A statement of the educational objectives of the College, formulated by the Committee in the winter of 1944, is indicative of its thought.

The College's educational aims can be viewed in terms of (1) developing the capacities of the individual student, (2) preparing the student to meet the situations encountered as a member of a society, (3) transmitting the cultural heritage of our civilization, and perhaps in terms of (4) the educational institutions and machinery at hand. These are all overlapping and, when translated into more detailed objectives, can be resolved into a group of curricular and of extra-curricular influences on the student. In terms of measurement of the changes produced in him, the following is illustrative:

Curricular portion—

The student should increase his competence in each subject by gaining:

1. Understanding of its character, its relations to other subjects, and its subclasses.
2. Mastery of its techniques, its history, and its present content.
3. Ability to make sound judgments; and skill for, interest in, and habit of, acting creatively in it.

The subject fields involved are: art, history, philosophy (and religion), natural science, social science, and, perhaps separate, language and mathematics. For each, the emphasis on the various aspects may differ greatly.

The outline just given could be applied specifically to art or to science, as examples, as follows:

Art—

1*a*. Comprehension of the nature of artistic works as a limited class
b. Comprehension of distinctions in the kinds of arts
2*a*. Knowledge of the history and techniques of various arts
b. Knowledge of masterpieces of the major arts
3*a*. Ability to make sound judgments—appreciation
b. Ability to create, and interest to create
c. Actual performance—perhaps to be examined much later

Science—

1*a*. Comprehension of the nature of scientific inquiry
b. Comprehension of the distinction in sciences; by principles, methods, content
2*a*. Knowledge of the history and techniques of the sciences
b. Knowledge of the conclusions of the sciences and of the data and methods underlying them
c. Knowledge of scientific systems
d. Understanding of mathematics
3*a*. Ability to make sound judgments—use of an analytic approach, recognition of multiple factors
b. Ability to create, to formulate problems and experiment with their solution
c. Actual performance—perhaps to be examined much later

Extra-curricular portion—

The student should develop in each personal attribute, such as interests and beliefs, by gaining:

1. Increased scope and adequate intensity of the attributes.
2. Harmony of each attribute with the others and with the individual's background, capacity, and plans.
3. Adequate skills and knowledge for sound growth of the attribute.

The attributes in question are: attitudes (values and beliefs); interests, (aesthetic appreciation, social sensitivity, sports and crafts, intellectual pursuits, personal relationships, and so on); actions (concerts attended, causes espoused, games played, books read, friends made, and so on).

The extra-carricular area has received far less attention than the curricular area in educational circles, and is far less clearly defined. More precise analysis involved expert psychologic and psychiatric knowledge, which has been made richly available to the committee. It is inappropriate to enter here such technical territory as ego mechanisms, superego strength and corruptibility, the problem of narcissism, aggression and other drives, security and conflicts, or, in general, character structure; and, indeed, higher education has thus far paid little attention to these aspects of development.

A SOMEWHAT different formulation, prepared a year later for the Committee's consideration, places the problems in a wider setting and is presented here in part.

The objective of the College is to produce changes in students. What students? What changes? To what ends?

What ends?

The greater good of the students? The greater good of the society?

Is there conflict between these ends? Should the student, for example, learn to fit into present society and be comfortable, or fight to alter it and probably be uncomfortable?

Can one be clear concerning what is good for society?

Can one identify the individual attributes which should be fostered to bring about these social goods?

Are we sufficiently clear about what is good for the student?

Is there, for example, some inverse relation between intellectual development and total adjustment?

More specific ends might be:

To enable the student:

- to find the greatest happiness
- to meet the problems of an educated citizen
- to modify, clarify, and realize his values
- to acquire the cultural heritage
- to develop all his capacities to a maximum
- to develop his intellectual capacities to a maximum

To influence society:

- by forming a model college worthy of emulation
- by producing persons with a maximum influence on society
- by examining critically its *status quo*
- by fighting its imperfections
- by carrying its cultural heritage
- by gaining position and influence

What Changes?

Greater intellectual effectiveness? More balanced character structure? More vivid and worthy values? Better social adjustment? Richer appreciation, knowledge, skills, and activities?

Are these attributes separable? Are they parallel (not in conflict, in the same frame of reference)?

To what extent can one identify the components of each attribute, decide which are most desirable, and direct the educational processes to increasing them?

The problem of greater intellectual effectiveness, previously indicated, was then considered in more detail under the headings, (1) the intellectual capacities; and (2) the use of the intelligence (to what ends, selfish or social; with what effectiveness, depending on character structure; on what material, involving environmental conditions and personal interests). Intelligence, itself, or the capacities, processes, and skills that constitute it, was considered further along these lines.

One scheme of analysis is into: (*a*) innate capacities, (*b*) knowledge on which to use them, (*c*) skills and habits of using them. If these were separately testable and the manner and degree to which they enter in particular performances were established, it would be possible to predict performance from measures of these factors. It should also be possible to determine rather precisely what contribution the College training has made in their development.

Another approach, less analytic but perhaps more immediately valuable, is to consider performance in a series of processes closer to the "applied" level of life situations. If a series of performance processes—such as logical reasoning, recognizing assumptions, objectivity, analyzing factors, observing accurately—were shown to be factors in intellectual performance in life situations and if tests of them were shown to have validity and predictive value, such tests would measure college achievement in increasing intellectual effectiveness. They would, although probably less sharply than the foregoing analysis, indicate the particular bases of success or failure in the educational process.

The objectives of the Evaluation Study (as separate from those of the College) were finally reduced, by January, 1945, to the following form, which clearly indicates the emphasis and method of the whole project.

The primary objective of the Study is (1) to help the College (faculty, administration) improve its educational performance; that is, the achievement of

its avowed objectives. A secondary but broader objective (2) is to supply data which would help the College judge the validity of its objectives. For this, and to be of use to other educational institutions, we would need to know how our products compare in terms of their educational objectives as well as our own.

Toward (1) [mentioned in the previous paragraph], the Study must (*a*) measure which changes are, or are not, produced, in our students and others. A secondary aim is (*b*) to identify the factors producing the final status.

Considering now only (1*a*), the Study should measure at appropriate intervals the degree of effective use of the intelligence in solving problems. Knowledge of the general status of individuals, outside this area, is necessary as part of the control data and as evidence whether students, while at the College, at least do not deteriorate in such areas as health (physical, mental, social).

For testing purposes, progress in each area can be, somewhat artificially, seen as a series of stages. Given an initial capacity, this is used by the student in college to acquire, first, knowledge and understanding of subject-matter; then skills and abilities to deal with problems in these areas; and, finally, habits of using these acquisitions in the normal course of living At each stage, not only the explicit college experience, but also the student's interests, attitudes (values), and character structure may influence his effective progress to the next stage. They are of importance here primarily in this connection.

Capacity is to be measured by the usual psychological tests; *knowledge* and *understanding* (in subject-matter fields) largely by usual achievement tests; *skill* and *ability* (in subject fields and in solution of life-problem fields) largely by new tests; and *habitual use* (in subject fields and in solution of life-problem fields) largely by new tests, schedules, and, especially, interviews. *Interests*, *attitudes*, and *character structure* are to be obtained through interviews, perhaps supplemented by schedules and other personnel data.

BEFORE considering the actual instruments used for testing, some further background is desirable. After the central committee had reached the positions indicated, eleven subcommittees were recruited from faculty, administration, and students to consider particular areas and plan operations. The most important and fruitful of these subcommittee reports dealt with tests, interviews, and questionnaires.

By the questionnaire method, students' opinions were obtained regarding the College as a whole (objectives, curriculum, facilities, social life—6 major divisions), the individual courses (7 questionnaires), and the University services (libraries, dormitories, student health, advisers, and the like—14 major divisions). The returns, in proportion and quality of response, were most satisfactory; and many local changes were made on the basis of the information gained. Nor did it harm the student's morale to find that his opinion was desired, considered, and often made the basis for action.

Much attention and experimentation was given to the general problems of the study: securing student co-operation and retaining it over the years; grading or rating performance, and recording and reporting the results; exploring and validating interview techniques and conditions, and the like. The rewards offered to students for their continued participation were twofold and served to maintain the necessary contacts: a full report is sent to each student of his

educational status and of the changes in this from time to time, against the norms for his groups; and a news letter keeping him informed of the general progress of the study is distributed at four- to six-month intervals.

Each participating school is sent reports of its students and their position relative to other groups. Each co-operating school is invited to appoint a liaison officer to contribute to test construction, handle the local students and testing, and help interpret (especially to his faculty)[1] the study findings.

OF ALL the instruments needed in the study, tests alone existed in any abundance. Early in the study, a battery of standardized tests was given to five students each in Grades X through XV, selected to cover the usual ability range, a solid week of testing—50 hours in six days! The results were disappointing. No tests adequately explored intellectual skills. As a consequence, an essentially new battery of tests was devised. These have been used and revised three times, and, while still far from testing adequately, they seem quite usable. In fact, many of the new types of items have lately been incorporated in revised forms of nationally used tests.

The present battery of tests[2] is given in four half-day periods of 3 to to 3.5 hours, arranged as desired. The rationale of item construction and some illustrative items are indicated in the following examples. In each area, a particular test item can be placed on two axes: one representing the subject content to be sampled; the other, the type of performance which can be tested at the level of particular knowledge, of general skills, and of ability to apply knowledge and skills to new situations. Thus, a two-dimensional table can be formulated and items devised for each square if desired. The table now in use in the sciences, for example, has ten subject subheads (astronomy—the earth, solar system, co-ordinate systems, time; genetics and evolution—evidence, factors, mechanisms, human pedigrees) and nine performance subheads (knowledge of facts, of principles; skill in handling graphical, mathematical, and tabular symbolism; skill in recognizing, evaluating, and testing hypotheses; ability to recognize validity and relevance of evidence). An item from the square "physics—*knowledge* of facts, and so on," is:

Which of the following involves the transformation of electrical energy into chemical energy?

A. The operation of an electric lamp
B. The use of an electric furnace to melt lead
C. The charging of a storage battery
D. The operation of a dry cell
E. The use of an electric stirrer to hasten the dissolving of sugar in water

A condensation of an item from "biology—skill in drawing conclusions from experimental data," with the first five of the observations and six of the stated conclusions, is:

[1]It is not a negligible problem to deal with a faculty on such matters. Many are unfamiliar with such an approach and must be guided gently into it. Only with adequate understanding and trust can their absolutely essential help in creating instruments be obtained. Only so will fears that some outside snoopers are going to seek their weaknesses and dictate procedures be alleviated. Only so will the objective but inert findings be translated into living curriculums and teaching.

[2]The present test battery includes: American Council on Education psychological (60 minutes), general skills (90 minutes), English (100 minutes), biological sciences (65 minutes), physical sciences (65 minutes), music-art-literature (150 minutes), social studies (190 minutes), mathematics (65 minutes), science reading (90 minutes).

Eight experimental observations, to be taken as correct and adequately established, are presented to the student, followed by 16 paired statements. The first of each pair is a conclusion drawn from the experiments. The student must judge whether the conclusion is warranted, goes beyond, or is contradicted by the evidence. The second item of each pair lists a number of the observations which might bear on the conclusion. The student must indicate which ones of these, collectively, best warrant or contradict the given conclusion.

OBSERVATION:

1. In the untreated tadpole of both frog Species A and frog Species B a lens forms in the ectoderm (outer embryonic layer of cells) at the normal site following the appearance of the retina.
2. The retina of the eye of a tadpole of Species A was surgically removed before a lens was formed. Following removal of the retina, a lens failed to form. The same degree of injury without removal of the retina was followed by normal lens formation.
3. The retina from a tadpole of Species A (the "donor") was removed prior to lens formation and transplanted to the belly region of a tadpole of the same species (the "host"). In the host, a lens developed in the belly ectoderm overlying the transplanted retina.
4. The retina from a tadpole of Species A was removed prior to lens formation and transplanted to the belly region of a tadpole of the other species, Species B. In the host, a lens failed to develop in the belly ectoderm overlying the transplanted retina.
5. The retina from a tadpole of Species B was removed before a lens was formed in the overlying ectoderm. A lens formed in the ectoderm at the normal site.

CONCLUSION:

1. The retina of Species A provides a physical stimulus to the overlying ectoderm, causing a lens to form.
2. In Species A the skin ectoderm at the normal site is necessary for lens formation.
3. In Species B the skin ectoderm at the normal site is necessary for lens formation.
5. In Species B the presence of a retina is necessary for lens formation.
9. Induction by the retina of potential lens-forming ability in Species B head ectoderm occurs long before actual lens formation is initiated.
10. In some vertebrates, lens formation can occur during the absence of a retina.

A complete item from the social-studies area, in the square, "economic conditions and related social policies—*ability* to recognize validity relevance of evidence applied to social issues" is:

The following items consist of a *proposition* and a series of *statements in evidence*. You are to judge the accuracy of the evidence and its relation to the propositions. For each of the following statements, *blacken* answer space.

A—if the scientific study of society establishes the truth of the statement, and it tends to *support* the proposition;

B—if the scientific study of society establishes the *truth* of the statement, and it tends to *disprove* the proposition;

C—if the scientific study of society establishes the truth of the statement, *but* it does *not* help to support or disprove the proposition;

D—if the scientific study of society *disproves* the statement, and it is therefore evidence neither for nor against the proposition;

E—if it is not possible for science to establish the truth or falsity of the statement.

Proposition:

Depressions are intensified by inflexible pricing policies and monopolistic practices in basic manufacturing industries of capitalist economies.

Statements in evidence:

The businessman, particularly in the basic manufacturing industries, should receive more consideration than this statement indicates, because price cutting may lead to retaliation by competitors to such a point that none of the firms may be able to recover their fixed costs.

Records of price series show that farm prices fluctuate more violently during the cycle than industrial prices.

Records of output show that farm production fluctuated less violently during the cycle than industrial production.

High prices result in a higher real national income; therefore, if it is desired to retain a high real national income, all attempts to

reduce prices should be resisted as long as other alternatives are available.
Business cycles are in accord with the natural laws of progress which require that inefficient producers, who crept in during good times and overburdened the system with inefficiency, be eliminated.

INTERVIEWING proved to be no problem. Students and their parents willingly made numerous appointments, and offered the interviewer hospitality in their homes. They discussed, without reticence, the intimacies of family relationships, finances, and the like.

The interview portion of the program has had two main divisions, the problem interview and the full-scale case study. Of the latter, little can yet be said. Some fifty students and their families, in several schools, have been fully studied, most of them at the eleventh-grade level, but few have had a second interview series as yet. A great amount of relevant information has been obtained: a surprising fraction of "normal" families are eager for social-service guidance; the pressure on students for marks is more severe from parents than other sources; many students are in need of guidance or psychiatric aid; academic performance is often profoundly modified by the home situation, and so on. Illustrative of the latter is the girl who, during a year in which she took no academic work in social studies, made striking improvement in the area. Her idealized elder brother, it was learned, had returned from extensive service in the Navy and had spent many evenings discussing world problems.

Such case studies will serve many functions. They will constitute a check on the accuracy and honesty with which questionnaires, personal records, attitude scales, and the like, have been filled out by students. They will richly supplement our knowledge about the attitudes, interests, sensitivity, activities, and so on, of these sample students. They should supply clues and evidence as to what curricular and extra-curricular factors are responsible for the progress made in the academic area, especially when this is distinctly greater or less than predicted from a student's mental abilities.

The problem interview, however, has been directed to one end: to estimate the extent to which a student, at various stages of his development, applies rational analysis to the solution of actual problems. No test can measure what a person will do in a non-test situation; students notoriously write better English in English examinations than in chemistry or economics examinations. The interview, then, attempts to elicit from the student a report of what he actually did in choosing an action, taking a stand, or otherwise deciding a problem in his own recent life experience.

Four areas were chosen for exploration; the educational-vocational, the social-political, the recreational, and the moral-religious. In each of these a person is called on recurrently, through youth and maturity, to take action. An entering Freshman may have had to choose his college; a recent graduate, his job. Political votes must repeatedly be cast (or neglected), donations given or refused, recreations chosen or rejected, values re-examined. In one or all of these major areas, the interviewer finds, by written or oral questions, some recent

decision the student has made, and then explores the manner of its making. Such aspects are examined as: first, the degree of the student's awareness of the problem, the initiative he exhibited in acquiring information, his recognition of any subjective bias or external pressures; second, the reliability and adequacy of his information, and its coverage of the essential aspects of the problem and bearing on alternate solutions; third, the soundness of his analysis and the rational utilization he made of his knowledge in reaching his decision. Besides an interview plan, a rating scale was developed (scale 0 to 4 on each item) for quantifying the findings. As an early step, a number of students was interviewed by one person in the presence of a panel, each member of which then made a rating of each student. Next, in a larger series, two or three judges made ratings from the interview records. These preliminary results clearly demonstrated the objectivity of our procedures; for only in rare instances did separate ratings of a single item vary by two points, most ratings being within one point. Much effort is still being expended to reduce criteria, interview results, and standards to essentially objective form.

Over three hundred students have been interviewed, largely in the vocational-educational and political-social areas. Eleventh-graders, on the average, exhibit little genuine concern over any problem in these areas and a limited range of awareness of the problems that exist. A smaller number of thirteenth-graders showed a much superior status, in range of interest in, intensity of concern with, and rational handling of life problems. Since, however, the advanced group was largely composed of entering veterans, obviously matured by their war experience, no conclusions concerning growth of college students will be possible until reinterview results are obtained.

The following brief summaries of two interviews indicate the sort of evidence obtained and its evaluation—both students chose to discuss a foreign-policy problem on which each had taken a vigorous position:

B. had recognized for two years that world peace is essential to his own survival as well as that of the world at large, and had since been deeply concerned with a solution to this problem. He had taken opportunity to listen at home to discussions on the topic by legally trained men, several with a European background; he had discussed the subject in a group of contemporaries organized for such discussions; he had read periodicals and other current literature relative to the topic; he identified several outstanding proponents and opponents of his position, both American and European; he cited many analogies from ancient and modern history both for and against his own position (favoring a world federation at present, a strong super-state ultimately) and was familiar with the outstanding alternative proposals. He reasoned on cultural, political, historical, and economic grounds that only a world federation of nations, which he defined and limited, can assure peace in the immediate future, and his conclusions followed his premises and evidence. He used historical analogies with recognition of particular conditions that limit their applicability to the present, and with skepticism about the reliability of current news sources On the negative side, he did not follow up an initial assertion that the prime objective of American foreign policy must be peace

with Russia, nor recognize the special problems associated with this country. He also failed to discuss the problems of implementing his plan and the difficulties it might meet under present international conditions; but this omission was probably due to a premature termination of the interview. B. received a high rating.

M. became conscious of a foreign-policy problem through the chance perusal of a national woman's magazine. She had neither made nor taken opportunity to discuss the issue with informed adults nor to acquire information by reading. She had not talked with contemporaries about this, but had written of it to friends, who ignored the subject in responding, and to a girl in British East Africa, whose name she had found in the magazine. Although this correspondence was undertaken simply because M. liked to receive and write letters, a letter from the foreign girl "fired" her with enthusiasm for a plan to preserve peace (by increasing personal acquaintance and understanding among "the common people of the world"). M. knew no alternatives (she spoke of arbitrary pacts between rulers, all in power, except in the U.S.A., without consent of the people, which had never yet eliminated war), knew no historical or other analogies to support her position, suggested no details of implementing her plan, foresaw none of the possible difficulties of making it effective. She had argued to her father that attendance at this school would further her legal education (she expected to practice law with her father) although she simultaneously planned to devote her entire life to promoting world understanding. M. received a low over-all rating on the use of rational procedures in taking an actual position.

OTHER instruments than the interviews have been used to probe the less academic aspects of the person. Each student, on entering the study, fills in a four-page personal-history form. Some have kept time charts on themselves over various periods. Many have been given attitude, interest, and other scales and schedules. The group Rohrschach test is being used in exploratory fashion. Student health records are obtained and so on.

A final note, before turning to the results, will indicate the range of questions which this study should potentially be able to answer. Each institution will test achievement of its own educational aims in terms of the changes exhibited by its students in comparison with like individuals. The same sorts of changes are not to be anticipated in various student groups. Also, all sorts of special local studies could be added. But, in addition, many general questions, of detailed educational technique or major educational strategy, should receive illumination from such a co-operative approach. Some of the points that have been kept in mind are indicated in the following list:

1. What relations can be found between initial test performance and previous educational experiences?
2. What are the effects of age, sex, cultural and economic status of the home background, specific interests, and other personal data on initial test performance? (Are special training and interest in art or music, for example, reflected in appropriate test scores?)
3. What are the interrelationships, at the time of entrance, among performance ratings on tests of scholastic aptitude, knowledge in various subject fields, intellectual abilities, and skills? Do these relationships differ for different schools and for different grade groups?
4. What educational plans and techniques are especially effective in producing par-

ticular or general improvement in test performance? How do general courses compare with the more traditional subject courses; lecture courses with discussion courses; reading and discussion of primary references with the use of textbooks; laboratory work with demonstrations? Do honors courses and other special programs have demonstrable effects on test performance? Do certain combinations of educational experience produce changes beyond those which might be expected from the mere sum of such experiences?

5. What changes can be attributed to the educational climate or non-curricular aspects of an educational institution? What of voluntary, as compared with required, class attendance? How does the scholastic-aptitude level relate to the rapidity of a student's progress? What are some effects of extra-curricular activities?

6. What rôle does success or failure play in the development of emotional adjustment and attitudes? Are there influences in an educational institution which have a disruptive effect on the student's health, emotional adjustment, and educational progress? (Does competition for grades work havoc on some students?)

7. What changes are seen in test results and their interrelations after the students have taken various secondary-school and college courses? Can any effects of particular courses be traced?

8. What changes in performance can be attributed to increased age and maturity? How does progress compare for students who have dropped school and similar ones who continue? What experiences, interests, and personality characteristics make for progress or lack of it? Is progress in certain areas favored more by formal or informal educational experiences?

9. What are the effects of such factors as mentioned in (2) on educational progress?

10. What factors (personal, educational, environmental) make for retention of the changes shown by the retesting? Are different types of educational growth (knowledge, intellectual abilities, and skills) retained to different degrees?

11. Is it possible to improve the quality of thinking and problem solving? Does a general-education program improve the ability to cope with problems of contemporary life? Do extra-curricular experiences contribute to effective citizenship?

12. Are the same or different techniques and conditions of instruction optimal for large and small student groups; for students of high and of average ability?

THUS far, aside from a number of special test runs, three major groups have been started. In the spring of 1945, about three hundred students completing the eleventh grade and two hundred completing the twelfth, in 13 secondary schools and our College, entered the study; and a year later, this group was retested. In the autumn of 1945 a new group was started, over fifteen hundred entering the eleventh and one thousand entering the thirteenth grades. Seven high schools and four colleges participated. A sample of one hundred students was retested in the spring of 1946, and the first full two-year retest was undertaken last spring. The third group, started in the autumn of 1946, included seventeen hundred students from eight institutions. Again, a sample of one hundred students was retested after one year (spring, 1947); the major retest is due in another year.

It is inappropriate to discuss the comparative progress in various performances by students from different schools. From time to time, special studies, using standardized tests, have been made of our students. That students completing the College (Grade XIV) at the University of Chicago compare satisfactorily with those

completing the standard college (Grade XVI) is attested by their performance on the Graduate Record Examination. A hundred graduating students who took the G.R.E. last spring achieved a median percentile rank of 92 on the national norms for college Seniors in their general education index; and in no segment of the general-education test battery did they fall below the 74th percentile.

Progress of our own students, retested in this study after one or two years, was considerable in most areas. A most satisfying finding is that the gain made during a year when a relevant course has been taken remains almost intact a year later with no further relevant course work. The tests, therefore, are measuring progress at a sufficiently general level so that the forgetting of details is immaterial. In fact, on the skill tests, general performance actually continued to improve over a year in which no further formal training was received. This finding, if it holds up, is an important evidence for the claim that skills, once attained, are automatically utilized; that a new way of behaviour has been established. It has been possible in many subject areas to relate gains to particular courses (in general, the first year of a two- or three-year sequence is most fruitful), but in some cases gains have been as great in students who did not take supposedly related courses as in those who did. A course in physical science, for example, apparently improved performance in certain skills in biological science, and vice versa. Problems in logic were handled much better after two years in college, whether or not mathematics had been taken.

The amount of progress varied widely from test to test. With items directed to testing the use of skills and abilities, the gain tended to be actually more than with those testing knowledge. Perhaps "thinking" really is susceptible of being "taught," as we like to believe. But, since gains are in percentage points on an arbitrary, and probably far from linear, grade scale, too much cannot be made of absolute quantitative values. Thus, students with poor initial performance (or low aptitude scores) made a greater numerical gain than those with good initial performance; but this does not necessarily mean a greater real gain. More significant are relative values. In some test areas, student performance on the retest was so improved that there was no overlap between the *pre* and *post* scores for the middle two-thirds of the class. In many cases, the retest median was above the initial five-sixth level (an upward shift of one standard deviation). And in some cases, the gain was not, or was barely, significant by the usual 5-per cent probability criterion. It is an interesting commentary on "passing" a course that, at the degree of generality of our tests, students start, progress in, and complete a given course at widely different levels.

The intensive detailed analysis of our findings will hardly interest others. What is worth note is that results so far do indicate that we are using an approach and instruments which seem able to yield the sort of information that is needed.

Despite its four-year duration, this study is really in its initial stages. Only one significant retest

[*Continued on page 54*]

Social Participation

By SEBA ELDRIDGE

Used as an Educational Device in a First Course in Sociology

THE dean of a western college appointed a special committee to consider and recommend changes in the social-science curriculums, particularly the establishment of a general social-science course. The history, economics, political-science, sociology, and philosophy departments were represented, the professor of philosophy serving in an advisory capacity.

The five committee members brought to the deliberations as many sets of unshakable convictions, all different. The professor of history had a broad conception of history and history study, but favored the usual combination of lectures, readings, and examinations as the staple content of history work. The economics teacher averred that courses in his field should be concerned with general principles and that the less they had to do with actual conditions the better. The political scientist accepted the "great books" theory of college education in general and of the social studies in particular. The philosophy teacher believed grounding in the "intellectual virtues" to be of cardinal importance. The sociologist proposed an application to the social sciences of "progressive education" principles evolved on lower educational levels—apparently a novel idea to other committee members. Thanks to the backing of higher echelons, the great-books man carried the day.

This conflict of views is typical of the widely varying positions taken in academic circles on the objects and methods of college education. While differences of viewpoint in such matters are to be expected, it is a fact that sociology and other social sciences have not worked out their curriculums in terms of actual student needs, upon which a substantial measure of agreement should be possible.

Confining our attention to sociology as an undergraduate discipline, this paper will maintain that effective sociological education depends on significant forms of social participation and that a shift in emphasis to this type of laboratory or practice basis is entirely feasible. Before indicating possible methods, it should be noted that only a small number of sociology students become professional workers in the field, and that a large percentage of these students take only the beginning course. For this reason the discussion will have special reference to introductory sociology.

Some further preliminary remarks may be offered. Social life in the United States revolves around the family and the occupation, and the chief responsibility for the conduct of family life falls on the vocational

group known as homemakers. Much less attention is given to the constituencies of working personnel, that is, the various categories of laymen, customers, and consumers. Yet competence in lay interests is hardly second in importance to job proficiency. The crucial rôle of the citizen in a political democracy is a cardinal example. Sociological education and, for that matter, sociological research could render notable contributions by laying the groundwork for competent laymanship in the major areas of specialization in our society.

We may be more specific. College students need practice in using the principal agencies of mass communication, more particularly the newspaper, periodical, and radio. The indications are that few college graduates read serious books except on vocational subjects; but virtually all read newspapers and listen to radio programs, and a considerable number read periodicals concentrating on current events. The specific need is practice and development of an interest in following truly significant trends and events. Only thus will students acquire the taste and the skill for keeping up with what goes on in the world and its impact on their own lives. This would be amply justified from the standpoint of ordinary sociological study; sociological principles are, of course, exemplified in current social phenomena and social change.

Students also need a thorough grounding in the practice of citizenship and community membership. Four years of social participation in this realm is not too long to build up habits, interests, and backgrounds which will carry over into the post-college world and offer some assurance of continued study and activity in this field.

College students need such premarital and preparental education as will enable them to anticipate as best they may, the needs and problems of marriage and family life. (Right now, of course, a considerable number of college students are married and many have children.) While introductory sociology could offer little education in this field, courses on the family provide greater opportunities. Girls need a thorough vocational preparation in this field, but young men also need preparation for their prospective rôles in family life.

This is by no means a comprehensive list of college students' social needs. Vocational counseling and education are basic. A foundation for the development of satisfying avocational interests is another need. Learning how to discipline one's attitudes and feelings has an important place in education on any level, but the discussion to follow must be largely limited to the first and second needs just noted. It is taken for granted that, since the needs of individuals differ about as much as persons themselves do, personal counseling has an important place in sociological education—perhaps as important as group activity.

THREE forms of the social-participation type of sociological education are now feasible and two other forms will become available as special laboratory or practice facilities are provided. First, the student's own social relations, past and present, can be utilized as a sort of laboratory material in making sociological ideas enlightening and useful. Second, civic

and other social agencies in the local community are often prepared to utilize the volunteer services of students and thus provide them with opportunities for significant social participation. Suitable opportunities here are quite limited, however, even in populous communities. Third, students themselves can be divided into groups for some forms of social activity. Fourth, organization of a campus as a full-fledged local community will offer additional opportunities. Fifth, still further chances could be created through the establishment of a community house by the college, designed to facilitate, in co-operation with the townspeople, a varied program of group and community activities in which students would participate.

Some examples will indicate the significance of these possibilities. A student's analysis of his social relations is particularly helpful in connection with the use of textbook and similar materials, and incomparably more effective than quizzes or objective tests on reading assignments. Here are two illustrations, each based on a textbook assignment:

1. Show with the aid of illustrations how your beliefs, sentiments and modes of behavior have been shaped by the culture traits and patterns of your community and of the country as a whole; and how your cultural development reflects the influence of cultural *specialties* and *alternatives* as well as cultural *universals*.

2. (*a*) List the groups of all sorts to which you belong, considering the various bases of group classifications noted in the textbook. (*b*) What is *ethnocentrism?* Name the three most cherished ethnocentrisms of your own. (*c*) Arrange in order of importance the three most influential primary groups in your life, past or present, indicating the main reasons for your ratings.

Experiments in my sections of the introductory course at the University of Kansas have shown definitely that working out problems of this order develops reliable analytical skills and leads to excellent comprehension of subject-matter. With a somewhat different problem assigned, students have made life-history studies of themselves or others rating quite highly as personal documents.

One point deserves special emphasis. Working problems is no less essential in sociology than in mathematics or chemistry courses. In the one case as in the others, principles or formulas must be applied to specific problems if they are to be mastered and become dependable intellectual tools.

Passing over the second form of social participation as a phase of sociological education, illustrations of classes organized for social action may be given. In some of my introductory courses the students have operated as citizens' groups. They listened to radio discussion programs coming on certain evenings, and the following mornings formed discussion groups with student chairmen for further exploration of the same questions. Some grounding in the techniques of group discussion and group leadership was thus provided. Members of the same classes subscribed to a news weekly, and once a week discussed leading events. As occasion offered, they took follow-up action after hearing and discussing the radio programs. So far as could be ascertained, all students valued the radio feature of the course, but many criticized use of the news weekly on the

ground that much of the news was stale when the class reached it. Following current events through a daily newspaper would have been preferable.

It will be noted that students were actually participating in public affairs and in the practice of citizenship and community membership, and that they were developing skill and interest in the use of mass-communication media serving these purposes. Inherent course limitations prevented as much follow-up action as was needed to balance the study and discussion features.

A SOCIAL-SCIENCE curriculum emphasizing techniques of social participation would have an important place for forum discussions of public issues conducted by students themselves; perhaps for polls of students' opinion after the discussions, with publication of the findings; and certainly for small study-and-action groups dealing more intensively with such questions and led by students themselves with only a minimum of faculty oversight.

Possibilities of a college campus, considered as the students' local community, have been exploited very little. True, campus politics, student councils, department clubs, organized houses, some special-interest groups and, at many institutions, student co-ops offer more or less valuable opportunities for social participation. Yet if, with official sanction and co-operation, an entire student body were organized as a community, with appropriate committee, discussion, and action machinery, opportunities could be provided all students for the practice of community membership. Experiments in my courses have necessarily been confined to studies of campus needs. Two examples may be given. A member of an introductory class made a painstaking survey of recreational facilities available to students, pointed out serious inadequacies, and offered constructive proposals for dealing with the problem. A student in an advanced course, who had experience as a library attendant, made a searching analysis of library facilities for students and indicated desirable changes. There was no follow-up action in either case because the University community was not organized for such purposes.

Curricular programs can be partly implemented through national and state organizations providing for college units. The League of Women Voters has some such units, and during the war the American Red Cross initiated a plan for college chapters. On many campuses the Y.W.C.A. is a militant organization concerned with local as well as national and international questions; and the Y.M.C.A. often operates similarly. As has been suggested, however, a student body needs special machinery of its own if it is to be educated in community organization by dealing systematically with its own problems as a community.

No instance is known to this writer of a community house designed to provide college students with diversified opportunities for social participation through group and community activities. These would be rather similar to programs of the better-type community centers in some cities. They would tie in with the activities of the student body organized as a local community. The objective would, of course, be the cultivation of a wide

variety of social skills and interests. In many of the activities the cooperation of townspeople and also of other college departments would be essential, as, for example, in the conduct of various adult-education programs.

BY WAY of recapitulation certain propositions may be stressed. First, sociological education through social participation, in conjunction with more familiar forms of education, is entirely feasible. Students can be readily organized, for example, to practice citizenship and community membership much as do ordinary civic and community groups.

Second, through organization of a student body as a full-fledged community, the establishment of a community house with a diversified program of activities, and utilization of opportunities for volunteer work in community and special-interest groups, facilities can be expanded to meet the requirements of a broad plan of social participation. Presumably, as much education on a laboratory or practice basis is needed in sociology as in the physical and biological sciences. The difficulties involved should be no greater than those encountered, say, by geology or by journalism as they shifted to such a basis.

Third, significant problem work is needed in sociological education no less than, for example, in physics and mathematics. Without it, relatively little progress can be made in the comprehension of subject-matter and mastery of the tools of sociological inquiry.

Fourth, as specialization develops, the importance of the layman's and consumer's interests increases in proportion. Citizens, residents of communities, members of families other than housewives, purchasers of ordinary consumer goods and services are the leading categories. The social relations involved are far less developed than those identified with vocations. Sociological education and research could render a service of inestimable value by helping to lay the foundations for enlightened, effective participation in these phases of social organization.

· With the · Technicians ·

Challenge and Retreat[1]

In higher education today there are two challenges which, if not understood, will work against each other. The first is to educate more people at the college level, and the second is to give those who come to college a better education. The veterans are especially critical of requirements and teaching methods. We have the opportunity to answer their criticisms and improve the effectiveness of higher education. But the great number of students applying for admission to college is a force which will tempt many a college to ignore the criticism and the opportunity.

It is highly probable that the greater the numbers to be educated, the lower the quality of the work which will be done or expected. In facing this dilemma, colleges fall roughly into three classes. The first will be willing to lower quality in order to give a higher education to more students. The second and most numerous class believes it can keep the standards it has established in the face of huge numbers. The third class takes the attitude that to meet the challenge of giving the veterans a real education, it is imperative for colleges to improve their standards and requirements at the same time that more students are to be educated.

Let us examine these three classes a little more carefully. The first class is realistic. The colleges so classified believe that it is more important to do what they can with the great number of students who want to be educated than to hold to a standard which is relative and not quite satisfactory anyway. They will do the best they can with the facilities they have. In one sense, that is what all the colleges are doing. But in another sense, such a statement could mean simply acquiescence to lower standards. Colleges are not doing their best if they do not try to maintain at least the quality achieved before.

Colleges of the second class are determined to maintain the old standards, and in this resolve they are apt to be deluding themselves. If they keep to the letter of the law, they will find that the old standard is often enough no longer valid nor desirable. If we examine what colleges mean by upholding their old standards, we will see that, with veterans especially, the use of old standards is really a lowering of standards.

Holding to old standards means generally two things: maintaining established admission requirements and graduation requirements. If a student goes directly to college from high school, many colleges assume that his high-school academic record is the best evidence of his ability to do college work. Some other tests and criteria have been found more valid, but, by and large, the high-school record is reliable enough for many admissions offices. If the student does not come directly to college, as is the case with veterans, the high-

[1]Reported by Donald G. Stillman, Associate Professor of English, Bucknell University.

school record is of very little value in estimating the applicant's ability to do college work. The veteran is a different person from the one he was when his high-school record was in the making. Other criteria for admission are necessary. Before the present rush began early in 1946, many colleges were making strides in finding such criteria, but, after the rush, the great numbers seeking admission made it easy to fall back on the old standard. In the case of veterans, holding the old standards is really avoiding an adequate standard.

What does "holding the standard" mean after the student has been admitted to college? For one thing, it would mean preserving the pre-war ratio of faculty to students. If there are more students, there should be more faculty members, or the quality of the work will slip. It is going to be difficult to keep the ratio in most colleges. Hence, if quality is to be maintained, improved planning and methods must be introduced somewhere to offset the increased numbers.

Holding the standard also means requiring the same number of semester-hours and the same proportion of quality marks for hours of credit. It may even mean requiring the same prerequisites for admission to advanced class work as if the student had come fresh from high school. Quality marks are, of course, indexes of good work. But what if the student shows that he can do advanced work without the prerequisite? Many will say, let him do it. Then comes the question, should he be given credit for the prerequisite course, or should he be required to take so many semester-hours of class attendance? In other words, is the veteran's experience, which enables him to go faster, to be recognized, or will it prove a handicap in getting a degree? To raise the question is to ask whether the degree is evidence of attainment or evidence of class-hour attendance. I am not advocating giving credit for by-passed courses. But if a student could pass comprehensive examinations in such courses, perhaps credit could be given. In any case, some thought should be given to letting the student prove his worth and fulfill requirements faster than the old standard would allow, especially if he shows superior ability or initiative. Another point to be considered here is that some colleges have courses which cover what a good secondary school would teach, and for this the students get college credit. Under such circumstances, should not those who are prepared be allowed to proceed more rapidly, whether they are veterans or not?

The veteran attending college wants an education, and he would also like to have a degree, but these two things are not to him synonymous. The old way of doing things may be the best way, but it frequently is not. And now that multitudes are crowding the doors of higher education, it is a temptation to set up the old standard as an arbitrary way of selecting and dismissing students. Adherence to artificial standards will make some of the earnest students withdraw voluntarily. This will not affect the number of students attending college perhaps, but it will affect the quality of the work done at the college. Loss of superior students makes any conscientious college take stock of its shortcomings.

The colleges of the second class,

then, in trying to hold to the old standards, may be hoodwinking themselves, or they may be maintaining a standard which is no longer valid or useful. In reality, to teach more students and at the same time to maintain a comparable quality of accomplishment requires improved standards, both for admission and for measuring the accomplishment necessary for graduation.

This brings us to colleges of the third class. These colleges are conscious of the need for strengthening the program of higher education. They are not using the huge numbers of applicants as a hedge to postpone re-evaluation of their standards. These colleges are comparatively few in number, but they are the leaders. They feel that now is the time to change, to improve the educational plan, to meet the challenge offered by maturer students now attending their institutions. Hardly a month goes by without the appearance of a publication announcing the revised program of some college in this class. These colleges are meeting the twofold challenge to educate more students better.

The point of this discussion is that all colleges must try to do both at the same time, because the use of old standards to educate more students, students who are more mature, is almost certain to result in doing an inadequate job. Can we really have an adequate return from the money and effort being invested in higher education now, if we do not have better standards at the same time that we give a college education to the largest number of persons in the history of the nation? We may fail to reach our goal, but let us not retreat before so urgent a challenge.

Notes from the "Survey Graphic"

Higher education receives attention among the articles in the special issue of the *Survey Graphic* (November, 1947) devoted to "Education in Our Time." This is the thirteenth issue in the series "Calling America," the various issues of which are concerned with immediately pressing social problems.

John Dale Russell, director of the Division of Higher Education, United States Office of Education, introduces the subdivision "Crisis on the Campus" with an article on "The Broadening College Base." He reviews the social changes which have resulted in a tenfold increase in college enrollments from 1890 to 1940. He weighs the wisdom of further expansion by three considerations and concludes:

> . . . in a democratic society there can be no overproduction of general education. The urgent need is that an increasing proportion of the population be well grounded in economics, political science, history, philosophy, literature, art, music, and related subjects that lead to better citizenship and an enriched personal life.
>
> . . . the limits of the capacity of modern society to absorb the product of higher education far exceed any present prospects for the production of college-trained specialists.
>
> . . . the cost of extended higher education would be trifling compared with the amount now spent, for example, on professional sports, cosmetics and beauty parlors, liquor, and tobacco. Finally, the money spent for higher education does not represent values consumed, but capital invested, and from that investment the society of the future may expect generous dividends.

Ordway Tead, chairman of the

Board of Higher Education, New York City, considers "Standards of Quality." He reports the veteran as a better student than his young classmate. He gauges the effect of the tremendous number of older more serious students thus:

. . . the veteran influence on the campus has on the whole been a tonic one. It has reached into areas where complacency or inertia had persisted in the prewar years. It has, by and large, helped to break down the town-and-gown separatism and has brought college and community closer together in new ways.

By tapping generously the lower economic levels where college education was formerly not a typical expectation, the veteran influx has unquestionably injected a certain earthiness and social realism which did not characterize our campuses in the dear, dead days. That this has been good for all concerned, I am certain; and particularly will it benefit the quality and climate of college life in the years ahead. Our colleges *will* be different; they will be less sequestered and less cloistered. The needs and urgencies of the times will be more deeply felt even though the ivy vines continue their classic whisperings.

. . . . . .

. . . if we want, as we sorely need, higher quality in college education in the years ahead, there will have to be liberal reenforcement and additions to the resources of every alma mater—not only material resources which will permit the necessary expansion and improvement of plant and equipment, but deeper and infinitely more precious resources of vision and leadership, on the campus and in the community from which education draws its support.

Since the responsibility for the support of higher education is shared by the institution, the community, the state, and the federal government, Francis J. Brown and A. B. Bond, Jr., both associates of the American Council on Education, conclude that

. . . this is a shared enterprise. All of us profit from the advances in knowledge made in the laboratories and classrooms of our colleges and universities. Equally, everyone has a share in the responsibility for seeing that higher education continues effectively to make its contribution to the individual, to the nation, and to the world.

Alvin Johnson, director *emeritus* of the New School of Social Research, reveals the use of the quota system in higher education. He asserts that

to discriminate on racial, national, or religious grounds is to confer a new potential of evil upon these differences.

. . . . . .

. . . The institutions of higher education insist today that their function is essentially a public function; . . . Then let them resolve once for all to forego the grave disservice of working toward the splitting of our common democracy into a collection of minority groups.

·The·Reporter·

A CENTRAL placement-counseling service has been established by Wayne University to supplement the placement service already existing within the University.

THE fiftieth anniversary of Northeastern University opened with the dedication of a new student-center building which represents an investment of $1,225,000.

A NEW laboratory is now being equipped by Rensselaer Polytechnic Institute to give added facilities for its program in nuclear science and engineering. The new laboratory will be opened to students of the graduate school in February.

SCHOLARSHIPS for orphaned students in South Carolina, white and colored, have been provided by James F. Byrnes from the proceeds of his book *Speaking Frankly*. The grants will be administered by the James F. Byrnes Foundation, Colorado Building, Washington, D. C. They will cover four years of college work and are expected to begin in the fall of 1948. If the proceeds are large enough, the scholarships may be opened to students in other states.

CONTRACTS totaling $2,108,235 for the construction of a new mechanical-aeronautical engineering building at the University of Minnesota have been awarded by the Board of Regents, and work on the new structure will be started at once.

EXISTING arrangements between Harvard University and Radcliffe College for the instruction of Radcliffe students have been formalized by action of the Radcliffe Board of Trustees and of the Harvard Corporation and Board of Overseers. The teaching arrangements, perfected through wartime experiment, provide for joint instruction of students in the two institutions in all cases where separate instruction would be wasteful of faculty personnel. Since Radcliffe College opened in 1879, Harvard professors have always supplied the instruction of Radcliffe students. Under the arrangements which are now made formal, most freshman classes in Radcliffe will continue to be taught separately from the Harvard freshman classes. In general, however, upperclass and graduate men and women will share the same instructors in lectures and in conference rooms.

FORTY-NINE representative American communities, ranging from metropolitan to rural, have been selected by the Public Library Inquiry for an intensive cross-section study of the country's library facilities. Twenty-three research projects will be undertaken, covering all aspects of the library as an institution for "community enlightenment." Financed by a grant of $175,000 from the

Carnegie Corporation of New York and conducted by the Social Science Research Council, the Inquiry is making a comprehensive survey of the adequacy of the public library as a civic source of information, and an analysis of its actual and potential contribution to American society.

GRADUATES of the Harvard Law School, led by former Secretary of War Robert P. Patterson, announced recently a drive to preserve treasured documents from the long history of law in Western civilization. A campaign has been started to raise $100,000 for a Treasure Room to house the Law School's famous collection of manuscripts and rare and ancient books which cover much of the history of law in Europe, Asia, and the United States. The Treasure Room will be air-conditioned and dust-free, and will permit the Law School to bring its rare collections out of vault storage so they can be seen as well as used. It will be a memorial to graduates of the School who died in the first and second World Wars.

A GRANT of $75,000 has been made to the School of Veterinary Medicine of the University of Pennsylvania by the Grayson Foundation, Inc., for a three-year study of equine infectious anemia.

SERVICES which will relieve the individual or the department of the expenses of clerical assistance have been arranged in two areas at Ohio State University.

A Statistics Laboratory has been established at Ohio State University. Its functions are to assist in the planning of experiments in all research fields, and to perform computations required for a complete statistical analysis and interpretation of research data. The services of the laboratory are available without charge to all University personnel engaged in experimentation.

A Chart and Graph Service has been established at Ohio State University to prepare pictures, charts, graphs, posters, maps, drawings for lantern slides, and so on, for any instructor who needs them for his campus teaching.

AIDED by a grant from the W. K. Kellogg Foundation, six universities—Bowling Green State, Cincinnati, Kent State, Miami, Ohio, and Ohio State—are co-operating in an extended health-education project for Ohio.

A GRANT of $155,000, to be expended over a five-year period for support of a program of Indian and related Asian studies, has been made to the University of Pennsylvania by the Carnegie Corporation. The program, which will include both teaching and research, will combine the activities of several academic fields and departments. Cultural, political, social, economic, historical, and anthropological aspects of the national life will be studied in relation to one another and to the total character of present-day civilization in the Union of India and Pakistan. The University will create a special department to administer the program.

THE newest piece of atomic-smashing equipment in the United States, an electron linear accelerator, has been

constructed by William W. Hansen of Stanford University. A three-foot section of the accelerator has produced electrons of more than a million and a half electron volts. Mr. Hansen predicts that a projected larger model, 100 to 200 feet long, which is soon to be built, will develop billion-volt electrons, the highest energy ever produced by man.

THE honorary chairmanship for American Brotherhood Week, which is to be observed February 22–28, has again been accepted by President Truman. Robert P. Patterson, former Secretary of War, will be general chairman. Others who will have leaders' responsibilities include George F. Zook, president, American Council on Education; Israel S. Chipkin, executive director, American Association on Jewish Education; Rt. Rev. Msgr. Frederick G. Hochwalt, director, Department of Education, National Catholic Welfare Conference; and Charles S. Johnson, president, Fisk University. Materials are available to schools and colleges which wish to partake in the observance. Inquiries should be addressed to Herbert L. Seamans, National Conference of Christians and Jews, 381 Fourth Avenue, New York 16.

UNDER the recent $100,000 grant from the United States Atomic Energy Commission, two professors have been appointed at Western Reserve University to do research on the effects of radioactive substances and of atomic energy on the body and on living cells. Paul A. Mattis, former professor of pharmacology in the University of Florida School of Pharmacy, will study the pharmacological and toxicological effects of various radioactive substances, and will direct the pharmacological division of the project. Paul S. Lavik, former assistant professor of biochemistry at Baylor University, will study the effects of radioactive elements on the enzyme systems in cells and will supervise the work of the biochemical division. Their work will be related to that conducted by the Atomic Energy Commission in institutions in various parts of the country.

THE Pennsylvania Society of Architects of the American Institution of Architects is sponsoring a series of three symposia in Philadelphia, in Harrisburg, and in Pittsburgh. The three institutions in Pennsylvania which have a Department of Architecture—University of Pennsylvania, Pennsylvania State College, and Carnegie Institute of Technology—are collaborating.

TWENTY regional scholarships "to help maintain Princeton's traditional character as a national university" have been established by the University. One scholarship will be awarded in each of twenty regions of the United States. The scholarships will range in amount from $800 to $1,200, depending upon travel distance from Princeton. Winners will retain the grants through their four years of college provided they maintain satisfactory academic standing.

THE National Research Council is again offering a number of opportunities for advanced study and research in the natural sciences. Fellowships for the academic year 1948–49 are being announced under

a series of programs financed from various sources, but administered under fellowship boards established by the Council. These are in addition to fellowships in the medical sciences announced separately.

The postdoctoral fellowship program is designed to permit young men and women who have demonstrated their ability in research in the natural sciences to spend additional time in uninterrupted study. The candidates applying for these fellowships must have completed the requirements for the Doctor's degree. Fellowships may be granted for study in the physical and mathematical sciences, geology and geography, biological and agricultural sciences, anthropology, and psychology. Stipends are at the rate of $2,500 annually, plus travel to the place of study, although larger stipends may be granted to Fellows with dependents. Appointments are for one year but reappointments for an additional year may be made in some cases. Applications for study abroad have been granted in cases where the additional advantages make it desirable.

A special program in the chemical and biological sciences, supported by Merck and Company, is designed to stimulate interest in fields requiring knowledge of more than one science. The fellowships under this program are therefore designed to give special training to individuals who have demonstrated marked ability in research in chemical or biological science and who wish to broaden their fields of investigational activity. As in the National Research Fellowships, candidates must submit evidence of training in these fields equivalent to that represented by the Doctor's degree and must have demonstrated unusual talent for research. Study abroad may be approved in some cases. The annual stipends range from $2,500 to $5,000, with an allowance for necessary travel. An allowance of $500 a year will be provided to the institution to which the Fellow is assigned. Fields of study will be in chemistry and biology, including the pre-clinical medical sciences. Initial appointments will be for a term of one year, renewable for a second, and, in exceptional cases, for a third year.

A third program, recently inaugurated by the Radio Corporation of America, has established fellowships to give special training and experience to young men and women who have demonstrated marked ability in the general field of electronics. Their preliminary experience may have been either in the fields of electrical engineering or physics. Although the applicants need not have completed more than one year of graduate work, they should have demonstrated marked ability for graduate study. These fellowships, open only to United States citizens, are in the fields of study underlying the general science of electronics. Stipends range from $1,600 to $2,100 a year. Appointments are for one year, but renewable for a second year and, in exceptional cases, a third year.

Further particulars concerning these programs may be obtained upon request from the National Research Council Fellowship Office, National Research Council, 2101 Constitution Avenue, N.W., Washington 25, D.C.

DIRECTOR Clarence S. Brigham, of the American Antiquarian Society, has been appointed the Rosenbach

Fellow in Bibliography at the University of Pennsylvania for the academic year 1947–48. As the holder of the fellowship, he will deliver a series of lectures at the University on early American newspapers.

The Rosenbach Fellowship was established at the University of Pennsylvania in 1929 through a gift from A. S. W. Rosenbach, internationally known bibliophile and collector, who is an associate trustee of the University. Lectures delivered under the fellowship are published by the University of Pennsylvania Press.

To EMPHASIZE the effectiveness of women graduates of Catholic colleges, Mundelein College has established the Magnificat Medal, to be awarded annually to the nation's outstanding Catholic college alumna. It is expected that the first medal will be presented on the Feast of the Epiphany in January, 1948. It will be awarded to the alumna who,

> utilizing her college training to the fullest, has intensified appreciation of Christian social living by the character of her own life and by her contribution to social, aesthetic, scientific, philanthropic, or religious leadership.

A LECTURE series on "Labor Legislation," to extend through the winter and spring, has been initiated at Wayne University under the cosponsorship of the Institute of Industrial Relations and the Detroit Bar Association. The Institute was made possible through acceptance by the Detroit Board of Education last fall of a grant of $7,500 from George A. Richards, president of station WJR, to underwrite expenses. Its major project is to determine "basic agreements that will be effective in the solution of industrial relations problems."

THE War Department is polling more than forty scientific societies to find out what happened to the nation's scientific talent during the second World War, says *Business Week*, and scientists hope the final results will bear out the need for a special pool of scientific men to be drawn into fields where they would be most useful.

The scientists, who plugged for that project during the war, already are encouraged by some early returns in the survey: almost half the chemists who got into the Army and Navy reported that their specialized experience had been used only partly—or not at all—in the armed forces.

A SURVEY of research needed to broaden this country's knowledge of Russia has been announced by Harvard University. The study will be financed by a grant of $100,000 from Carnegie Corporation of New York. The research committee under the direction of Clyde K. M. Kluckhohn, professor of anthropology, will pose a series of questions regarding postwar Russian life and culture and will determine the extent to which data answering these questions now exist. Thus, it will supply American scholars with an outline of some of the gaps in this nation's knowledge of the USSR.

·Editorial·Comments·

Gifts of Books and Periodicals

WITH the increasing flow from abroad of gifts of books and other publications for the Japanese people, knowledge of SCAP's (Supreme Commander for the Allied Powers) rules for handling and delivery of such gifts is becoming increasingly important. The following information has been supplied to the JOURNAL by W. C. Eells, Adviser on Higher Education, Civil Information and Education Section, Supreme Commander for the Allied Powers.

Books and other publications from outside of Japan may not be addressed directly to Japanese nationals or Japanese organizations. The machinery set up, however, ensures their delivery to designated recipients with a minimum of delay. SCAP's channel for delivery of gift informational and cultural printed materials to the Japanese people is the Civil Information and Education Section.

Such gifts must be addressed to the Chief, Civil Information and Education Section, General Headquarters, Supreme Commander for the Allied powers, APO 500, care of Postmaster, San Francisco, California. In a corner of the address label should appear this statement: "For Military Agency: Gift Publications." Inner labels of the packages may indicate the intended recipient, but in addition to them the sender should write a letter to the Chief of CI and E, listing the publications sent, naming the Japanese people or organizations for whom they are intended, and including any special instructions.

Upon receipt of a package and a covering letter, CI and E—unless it has reason to believe the publication or publications will negate the objectives of the Occupation—will transmit the gift to the Ueno Imperial Library in Tokyo, which has undertaken to deliver all such gifts to the designated recipients. This library handled exchanges of official and technical publications with other countries before the war. Recipients of gifts, are to acknowledge their receipt, by letters to the donors.

Gift subscriptions to magazines or other periodicals may be sent from abroad in the same manner, the requirement being that the letter of instruction to the Chief of CI and E regarding the intended recipient shall be received before the first copy of the gift periodical. In the United States, post offices will accept packages of gift printed material for Japan up to 70 pounds. In other countries, the maximum mail package weights vary. Publications for which no delivery instructions are received by CI and E will be considered as intended for the Japanese people at large and will be placed in public libraries.

Like food and clothing in gift parcels from abroad, gift publications must not be sold by the recipients or otherwise allowed to get into commercial channels. Japanese receiving gift books and other publications through the approved channel may, however, circulate them among friends or give them to libraries.

There has been a steady increase in the volume and variety of information materials flowing into Japan since the end of the war. Included are the books and the periodicals which the United States and United Kingdom governments have provided for the SCAP information libraries in Japanese cities, articles the same governments have provided for release to Japanese newspapers and magazines, news and feature stories and articles released by licensed Allied news agencies, Allied magazines sold under license, educational motion pictures provided by Allied governments, picture exhibits, and radio broadcasts from foreign stations.

Particularly needed as supplementary materials are publications concerning agriculture and allied sciences, medicine and surgery with emphasis on developments since 1940, education with emphasis on teacher-training, the social sciences with special reference to social-welfare work, youth and labor-management relations, philosophy and religion, objective history of the world, architecture and engineering, the fine arts, and general science and technology. Stories for children are also needed.

R. H. E.

Letter to the Editor

I would like to question the desirability of publishing articles like Dean Little's in the October issue. This is subtitled "How General Education Has Been Made Effective at the University of Florida." No evidence whatsoever is presented that it has in fact been made effective. . . .

I feel sure that just as several articles about the Florida program misled me into rating it far too highly before I participated in it, so other articles by other proponents of a curriculum have similarly misled me. Is there not a responsibility resting on editors of educational journals to ask for some sort of evidence?

LEWIS A. DEXTER
Hobart and William Smith Colleges

Education, particularly general education, is a very complex process. Its purpose is, or ought to be, more effective living, not only in class and on campus but in adult life. The most valid evidence of its effectiveness would be secured through a carefully controlled study of the behavior of students and alumni over a long period of years. Such evidence is very difficult to obtain. So far as I know, the study recently initiated by Princeton University is the only large-scale attempt to collect such evidence.

Usually teachers have to use other types of evidence—examinations, quizzes, standardized tests, anecdotal references, observation of the students, and so on, whose validity at best is less than perfect. There will always be persons who are more or less successful as citizens than they were as students. Just as no laboratory techniques can take the place of the physician's judgment as to the progress of the patient or the effectiveness of a course of treatment, so no evaluating procedures can relieve the teacher of the obligation of making his judgment concerning the effectiveness of his course and the achievement of individual students.

Dean Little's article seems clearly to imply that teachers of the general-education courses at the University of Florida are working at the job of making them effective and collecting evidence on the effectiveness, and that in their judgment the courses are in a large measure effective. The article would have been better if it had included a more explicit presentation of evidence. Incidentally, in the March, 1947, issue of the JOURNAL, W. G. Carleton, social-science chairman at the University of Florida, did present evidence of the effectiveness of one phase of the program (*see* pages 128–34, 170).

R. H. E.

··Reviews··

A Charmingly Written Book

PHILOSOPHER'S QUEST, *by Irwin Edman.* New York: Viking Press, 1947. 276 pp. $3.00.

Mr. Edman's extremely readable and charmingly written book provokes some important questions for educators, especially concerning the teaching of philosophy to undergraduates. According to the author, philosophy is essentially inquiry, a process and an attitude rather than a set of beliefs; and the book is quite successful in conveying this mood to the reader. Mr. Edman is in good company here; he is at one with Socrates, who asked many more questions than he ever answered. Moreover, everybody would agree that it is important to stimulate a critical attitude in the mind of the student. Nevertheless, this approach is not wholly satisfactory. The perplexed student would like some solutions; he needs a framework of general ideas from which to envisage the issues of daily life. Shall we, therefore, say that the teacher ought to impart a set of philosophical beliefs to the student—presumably the teacher's own? But that would make for dogmatism. Some of us teach philosophy by way of introducing the undergraduate to the great masters. While this method has obvious merits, it has its dangers too. The student is exposed to one philosopher after another. Here is a thinker who seems so wise that he captivates the student, only to yield his power to the next philosopher who is at odds with the first and yet seems right too. The succession of discordant loyalties is inevitably demoralizing. The student is apt to draw the conclusion that there is no such thing as philosophic truth, and that philosophy is simply a skillful way of playing with words. Thus the two extremes, the approach through inquiry and the approach through discipleship, tend to bring about the same result, namely skepticism. The reviewer has no answer for this serious educational problem.

Philosophers in this country have, on the whole, written for each other and, as a consequence, they have failed to communicate with the public—even with the educated public. Mr. Edman deserves credit for having written without jargon and in normal and excellent English; he achieves communication with the lay reader. Yet, surely, readability is not enough: there must be adequate substance for a book to justify its existence. Philosophy is a two-sided affair. On the one hand, there is its hard professional core; philosophy is technical and logical. On the other hand, there is philosophy as wholly unprofessional, as wisdom and as depth of insight concerning any facet of life. Unfortunately, thinkers in this country have tended to ignore philosophy in its character as a love of wisdom. Professors of philosophy have been specialists, where philosophy should be also a synthesis transcending all specialisms. Now, Mr. Edman has not written a technical work in philosophy; so far so good. Has he written a wise book? This book is thoroughly enjoyable and carries one along, almost like a story. Indeed, it contains several very skillfully composed stories. Nevertheless, this reviewer is led to conclude that the best wisdom can emerge only after some of the hard technical labor has been tackled.

RAPHAEL DEMOS
Harvard University

A Gigantic Task Attempted

THE THEORY OF HUMAN CULTURE, *by James Feibleman.* New York: Duell, Sloan and Pearce, Inc., 1946. xiv+361 pp. $5.00.

In this book Mr. Feibleman has attempted a gigantic task, and it may be considered mere carping criticism to suggest that he has not quite pulled it off. Feeling that the study of culture has lacked leading principles, while philosophy has at the same time been suffering from the lack of application, he attempts here to fuse the two. Drawing upon

materials that indicate vast reading in sociology, psychology, and anthropology, he sets out to develop a philosophy of culture conceived, he says, as applied ontology.

The work is divided into three parts, dealing respectively with the elements of culture, some examples of culture, and the treatment of culture. The elements take us first to the human individual, who is, it seems, motivated by three basic needs: feeding, breeding, and inquiring. Human culture is thus to be understood as the result of the response made by the members of a social group to all three of these basic drives. We then can find the "implicit dominant ontology" or "i.d.o." of a given group as the beliefs they all hold in common, whether physically (as in the case of striped muscle) or subconsciously, or consciously. The "ethos" of a group is the affective content or quality of the i.d.o., while as an ordinary affair the i.d.o. may be considered as the common sense of the group. The "mythos" of a group is "a people's beliefs told with an affective overtone." (Incidentally, "the myth of Jesus is the myth of the acquirement of the tool of logic.") From another point of view, the elements of culture are given as the i.d.o., morality, and "the extrinsic value of culture: its worth to organizations beyond it." There are seven main types of culture, running from the infra-primitive to the as yet unrealized ultra-scientific. With regard to the latter, the author speaks in the future tense but with perfect assurance.

The semi-oracular statements of the first part are supported by an analysis of various cultures, including the advanced culture of the English, where the author descends to the banality of a Sunday supplement. In this same section, scientists and mathematicians are chided for the use of such terms as "field," "waves" of probability, "operators," and "families" of points. These terms, it seems, are emotional and stand in the way of true scientific progress.

In part three, the presupposed Platonic realism or "axiologic realism" comes to the fore as we learn how to advance our culture. We need first the Socratic method of therapy, and then we must turn our attention to those values which are independent of physical facts or human minds. Since "the human search for values is independent of history," we clearly must not fall into the error of deriving any kind of ethical relativism from our anthropological studies. Philosophy is once more "immutable truth," and "all sciences are equally normative in that they describe what ought to be, rather than what is."

As a philosopher I cannot criticize Mr. Feibleman's argument, for he tells us that he has established it in a previous book. The details of his cultural analyses I leave to the specialists, with the sad feeling that if they find as many errors as I have found, they will feel that the ultimate philosophical synthesis is yet to come.

MASON W. GROSS
Rutgers University

The Past and Future of the Science of War

THERE WILL BE NO TIME, *by William Liscum Borden*. New York: Macmillan Company, 1946. x+225 pp. $2.50.

SCIENTISTS AGAINST TIME, *by James Phinney Baxter, 3rd*. Boston: Atlantic—Little, Brown, 1946. xv+473 pp. $5.00.

These two books appear in apposite conjunction to cover the past and future of science in war; and the conjunction illustrates at once the defects and virtues of that system of thought which may be regarded as the religion of our age. Despite the necessarily rapid and somewhat cavalier treatment that Mr. Baxter is forced to give the various departments of his broad subject, the result is a sober, painstaking account of great things achieved by small degrees. Despite the fact that Mr. Borden has scientific justification for nearly everything he says, the outcome is an extrapolation only a step removed from the Sunday supplement.

The latter author indeed might have profited by some investigation of the former. Had he had access to Mr.

Baxter's manuscript, how many times he would have found that after a long series of experiments, involving some of the best scientific brains in the country and many thousands of dollars, the desired end was attained only to have the military men pronounce that end "of no operational value." The fact is that human conflict remains an art in the face of efforts by scientists—and a good many warriors—to reduce it to a basis where results are predictable from a definite quantity of input. Mr. Baxter illustrates the point in his chapter on the submarine campaign: the Germans were quite sure we were using infrared to detect their U-boats and worked feverishly on defenses which were, of course, valueless against the extreme short-wave radar actually used.

Mr. Borden, like most scientists these days, puts the atomic bomb into the future of warfare and comes out with a picture of general devastation. What is more important, the main thesis of his book, is that he comes out with a picture of World War III, or U. S. War VIII, as a conflict in which infantry operations will be unimportant, that will be extremely short and fought without the intervention of the home front. This leads up to a plea for what he calls a rational policy, at the heart of which (being a scientist) he puts a vast program of scientific research which is to have precedence over every other national activity.

His reasoning is persuasive, but only if one grants as major premises facts which are in many cases assumptions and in others not facts at all. He states baldly (page 9) that had the Germans been willing to accept high losses in a few more air attacks on England in 1940, "the Royal Navy . . . could have offered little resistance" to an invasion. He repeats the exploded fiction of the air forces that "American long-range bombers finally knocked out [the Japanese] industrial vitals" (page 15). He completely neglects the fact that the last war also was foreseen as one involving small professional armies, of short duration and ending in the destruction of entire populations (through gas).

It is a relief to turn from this overwritten and underrealized volume to the sober pages of Mr. Baxter. Most readers will naturally turn to the story of the atomic bomb, which forms both the end and the climax of the book, but it is a story already twice told in other works which give it in considerably greater detail. Mr. Baxter is right in keeping it small; the bomb had little, if any, effect on the war against Japan and none at all on the operations against the European Axis, and his book is the story of what scientists contributed to the war.

It is already a fat volume and a long one, but it is rather a pity that Mr. Baxter held it within such limits when he might have said a great deal more. On malaria control, for example, he does not neglect the work that was done, but nowhere suggests such results as those attained on Guadalcanal, where, if at one time 15 per cent of our forces were hospitalized with the disease, the Japanese a few hundred yards away had 80 per cent of their men in a similar state of infection, and lost nearly 40 per cent of all their troops on the island to malaria and its by-products. Even without any operational details, Mr. Baxter had an immense amount of material to cover. There is, first of all, the organizational story of how the scientific research workers of America were brought together under a unified command and allocated to the necessary tasks with as much precision as a division of destroyers at maneuvers. There is next the story of how this organization worked out in the many different fields where it undertook research and what the results of that research were.

It is a story of which Americans may well be proud. Since the war ended we have been hearing a good deal about the wonderful scientific devices produced in Germany and how far ahead our enemies were in certain fields, notably those of guided missiles and submarine propulsion. If it has occurred to anyone to wonder how we won the war against such technical odds, an evening with *Scientists against Time* is suggested. The Germans may have attained a certain amount of success with those grandiose

and cloudy projects which so disturb Mr. Borden, but their American opponents, in closest liaison both with the producers and military men, were turning out the devices that were of immediate service in the field.

FLETCHER PRATT
New York City

Replete with Anecdotes and Description

PRINCETON: 1746–1896, *by Thomas Jefferson Wertenbaker.* Princeton, New Jersey: Princeton University Press, 1946. v+424 pages. $3.75.

In this readable volume, Mr. Wertenbaker ("Bicentennial historian" of the University) sketches the first one hundred fifty years of Princeton history. In so doing he traces, as well, the fascinating development of college education in America.

Probably because he is a Colonial historian, the author dwells at considerable length upon the earlier days of the institution—known until 1896 as "the College of New Jersey." In those pioneer years, the College trained many of its young men for ministry in the reformed wing of the Presbyterian church. The relationship of the College to the evangelical movement known as "The Great Awakening," the support which the College received from the "New Lights," and the influences of "the dissenting academies" upon the College are important phases in that early part of the story. During that controversial period among the Calvinistic congregations, Princeton profited by drawing "reformed" students from New England, whose only alternative would have been attendance at "Old Sides" Yale or Harvard. As such controversies gradually diminished and died out, Princeton lost that advantage but retained wide support from the closely knit Presbyterian communities in the middle colonies and the South.

Under the leadership of President John Witherspoon, preparation for the ministry gave way to preparation for civic leadership and public service. Of those who studied at the College during the administration of Witherspoon, one became president of the United States, four were members of the Continental Congress, ten were elected to the United States Senate, nine became governors, one became a justice of the Supreme Court, and one was attorney general of the United States.

From that heyday the College slumped into three decades of declining influence which Mr. Wertenbaker characterizes as its "nadir" and blames on the opposition by trustees and faculty to liberal tendencies and impatience with restraint upon the part of students and alumni. Beginning about 1828, however, the tide turned and, under the guidance of John MacLean, the College regained sufficient prestige and strength to tide it over the difficult Civil War period. A golden age of growth and development was achieved under the presidency of James McCosh, which was epitomized by the transition from a college to a university—formally effected in 1896.

Mr. Wertenbaker has been painstaking in his scholarship and discriminating in his selection from the abundant material available to him. The book is replete with personal anecdotes and descriptive matter which deftly interspersed throughout its pages breathe life into historical facts. The author has taken threads of special interest to Princetonians and threads of value to educators and historians, and has woven them deftly into a fabric which deserves a wide and continuing general appeal.

WILLIAM E. STEVENSON
Oberlin College

A Useful Little Volume

EDUCATION FOR LADIES: 1830–1860, *by Eleanor Wolf Thompson.* New York: King's Crown Press, 1947. ix+170 pp. $2.75.

This useful little volume, pleasantly written and admirably documented, deals with a period when ideas concerning education were in a state of ferment in America. The same period also saw a great increase in the output of magazines designed to entertain and instruct women. It is interesting, therefore, to consider what part such periodicals took in

acquainting their readers with the new ideas on education, and in preparing them to accept the changes for which reformers were agitating.

The author of *Education for Ladies* has set herself the task of finding out just what ideas on education were being presented to American women from 1830 to 1860, and to this end she has examined all the best-known, and many of the little-known periodicals of the time. Her excellent bibliography (pages 140–63) describing this material, and listing the secondary sources used in her work, should be helpful to students of the period interested in these decades.

After an introductory essay presenting briefly the types of magazines offered to ladies, the volume is made up of a series of chapters dealing topically with the somewhat heterogeneous mass of material on education that appeared in these publications. This varied material has been well organized, and is so presented as to keep the subject of education steadily before the reader, with the magazines themselves largely (and wisely) relegated to the footnotes.

The author finds that "there was scarcely an editor—male or female—in the mid-nineteenth century who did not discuss education" (page 24). Underlying all these discussions was the belief that the goal of all training was "the development of a fine person through general or cultural education" (page 31).

The importance of "female education" and the subjects a young lady might properly be taught played, naturally, a large part in magazines addressed to women. Two chapters are devoted to these topics, and adequate evidence is given that the ladies' magazines advocated subjects relatively new in the curriculum. More important historically, perhaps, are the later chapters, revealing the part periodicals took in the crusade for free public education and for the training of teachers by the state. There was much public opposition to be overcome before the principles that govern American education today were universally accepted. Periodicals for women, notably the widely read *Lady's Book*, performed a valiant service in their championship of free schools, and in helping to familiarize their somewhat conservative readers with the new doctrines. Through her study of nineteenth-century magazines, from a special point of view, the author of *Education for Ladies* throws valuable light on one of the forces that helped to bring about the acceptance of principles generally considered basic today.

BERTHA MONICA STEARNS
Wellesley College

A Fresh Perspective

SOME TASKS FOR EDUCATION, *by Sir Richard Livingstone.* New York: Oxford University Press, 1946. vii+98 pp. $1.50.

One does not have to agree with every detail of this heartening assembly of four addresses by one of the most perceptive of modern educators, to realize that here is insight into educational objectives of the highest order of excellence. To dismiss Sir Richard as a classicist would be a trivial reading of some of the most profound *aperçus* resulting from a full, rich experience with English education. While different in content, these addresses are identical in elevation of mood and perception with Alfred North Whitehead's *The Aims of Education*, which is another seminal volume of great utterances by a great man.

Especially the essays "Education for the Modern World" and "Education and the Training of Character" speak to our American concern for the crassness and ephemeral triviality of much that is in our land allowed to pass under the name of education. They offer a purifying breath of awareness of fundamentals, of placing first things first, of putting education back upon the track of its high mission. They offer, in the language of the author, "a vision of greatness" in the educational task now confronted. Their emphasis lifts the discussion to a plane where it requires searching of heart by every American educator.

I say again, one does not need to subscribe to every sentence to be caught up into a fine sense of fresh perspective,

necessary standards, new criteria in the light of which to judge the American college scene.

The eloquence no less than the good sense of this volume will not be conveyed by further comment so much as by a direct reading. If I have suggested that no one interested in higher education should defer a study of this book, then my review has served the intended and desirable purpose.

ORDWAY TEAD
Board of Higher Education, New York City

Education with a Deadline

FREDERICK BURKHARDT

[*Continued from page 12*]

heritage as we can. But let us not in doing so prejudge other alternatives. Let us remember that we have a deadline and that, in view of it, we cannot risk doing a disservice to the science of man.

If the deadline and the common quest are both remembered, then we need not fear the differences, or gloss them over—the more clearly and sharply the sides are drawn, the better for our understanding. But then competition will be focused where it really belongs, in meeting the deadline successfully, and the competitors will draw their encouragement not from forays against one another but from prospects of the larger victory. For though the menace of the new age is clear, so too is its promise. We can see the general features of the world as it could be if the powers and techniques which now exist as alien and threatening, could be put in service of men who have come to understand themselves. This prospect too we should remember, perhaps most of all, for dimmer ones have summoned miracles of energy from men before this.

It is on this note that I should like to conclude with a passage from my beloved teacher, Max C. Otto. He says, speaking of the long march of mankind toward "a Promised Land pictured by an unconquerable urgency in the human spirit":

> The drive of that resistless march is in us and about us. It should give us hope. The attitude of mind needed in our world, by whatever name it may be known, is outspoken reverence for this long pilgrimage, and outspoken confidence in the men and women who march in it today.[8]

A Study of Educational Progress

R. W. GERARD

[*Continued from page 32*]

books and learn as much about our has been made, and this of groups examined initially with instruments in an early formative state. It is being reported on at this time because general interest in it has become pressing, because many other institutions are turning their attention to such evaluation problems, and because the study may soon expand to a truly national one under widened auspices. The University of Chicago hopes that this small pioneering effort to make an objective evaluation of educational progress, to create adequate principles and instruments for this, and to encourage other institutions to tread with it the path of evidence rather than that of opinion, is but the start of a great epoch in education of guided, not guessed, experimentation.

[8] *The Human Enterprise.* New York: F. S. Crofts and Company, 1940. p. 369.